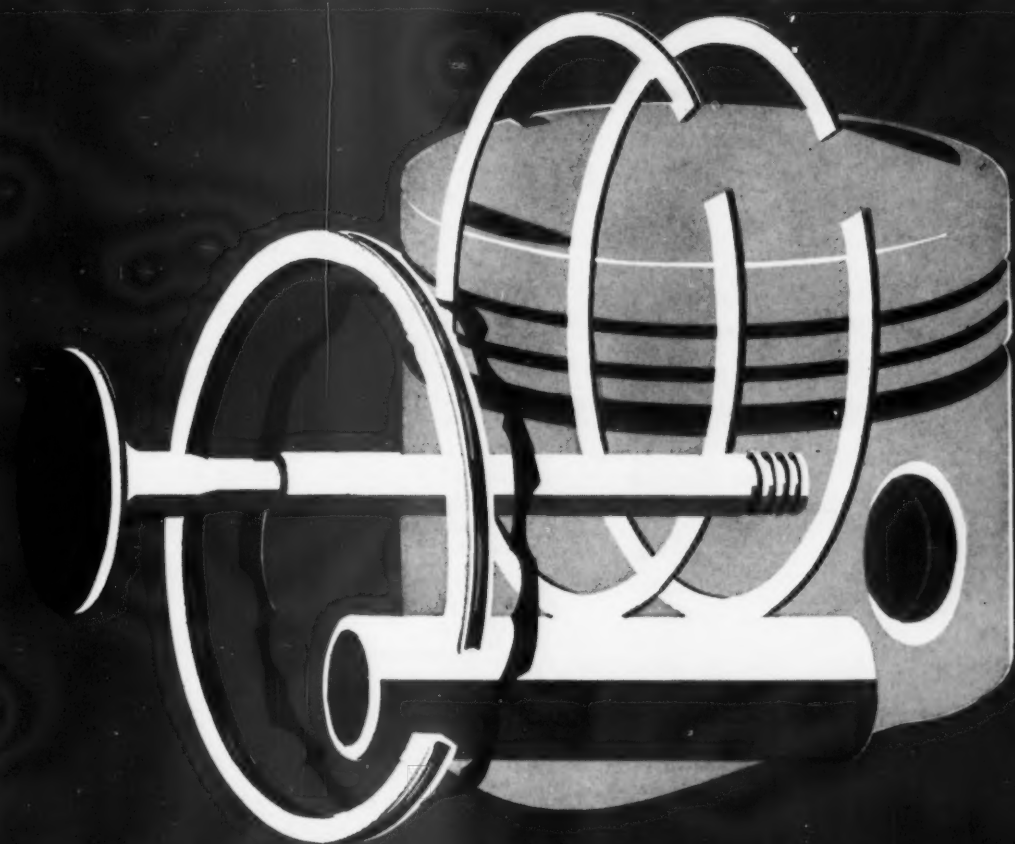


CHILTON'S

MOTOR AGE

August, 1959



VALVES & RINGS

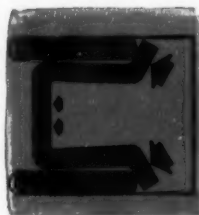
the bread and butter service

Also in This Issue: Arresting
the Anti-Freeze Market Thief

Here's why Perfect Circle's
Chrome "98" Oil Rings
give long life and
full power protection!

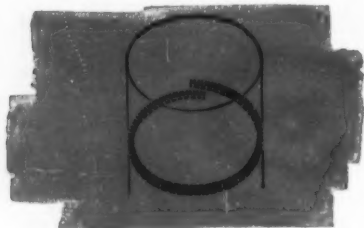


The ring that's making "high compression history" is Perfect Circle's three piece steel rail-type oil ring. Combination expander and spacer is made of special high carbon spring steel of remarkable flexibility.



While the rails are being pushed evenly against the cylinder wall's entire circumference, they are also pushed snugly against the upper and lower sides of the ring groove. 18% of the force of the expander is exerted

to press the rails against the sides of the groove and 82% is exerted in forcing the scraping edges of the rails against the cylinder. Since the ring assembly has no side clearance, no oil can accumulate at this point to be squeezed out onto the cylinder as the ring moves from one side of the groove to the other because of gas pressures, friction and inertial forces. The result is a ring that provides *both* face and side seal.



Combination expander-spacer is the secret of the success of the "98" ring. It supplies the expansive force which gives the rails their cylinder wall pressure and *at the same time* forces both rails sidewise to seal them against the sides of the ring groove. When installed in the piston groove, the spacer-spring is compressed by the amount of over-lap shown here.



TESTED AND PROVED BY 10 YEARS AND 100-MILLION MILES OF DRIVING! It's been over 10 years since PC test cars were first driven with "98" oil rings installed. Tests prove conclusively that the "98" ring can reduce oil consumption past the rings on high vacuum engines as much as 75%. No other piston ring has contributed so much to high compression history!

INSURE CUSTOMER SATISFACTION! Install Perfect Circle 2-in-1 Chrome piston ring sets and new Perfect Circle Valve Seals for *complete* performance and economy at lowest possible cost.

PERFECT



CIRCLE

PISTON RINGS

POWER SERVICE PRODUCTS

Hagerstown, Indiana

In Canada: Don Mills, Ontario

ANOTHER BLUE STREAK
SECRET SERVICE TIP FOR YOU.

SHERLOCK MCKANICK and MIKE

"A CASE OF UNEXPECTED
CROSSFIRE."

I KNOW YOU JUST TUNED THE
ENGINE AND CHANGED THE SPARK
PLUGS, BUT IT'S STILL MISSING...
DO SOMETHING QUICK!

OK, OK,
MISS FYRE.
I'LL CHECK
WITH
SHERLOCK!

SPUTTER

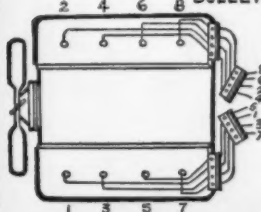
SPUTTER

SHERLOCK, I CHANGED THE PLUGS AND
ADJUSTED THE POINTS AND CARB IN THIS
CHEVY V-8, BUT THE ENGINE IS STILL
SPITTING BACK.

HM-M-M, CHEVY V-8.
MIGHT BE A CASE OF
CROSS-FIRING DUE TO
INDUCED CURRENT. LET'S
LOOK AT THE CAR.

"IN MANY CARS WHEN PLUG WIRES RUN PARALLEL TO
EACH OTHER, THE HIGH TENSION CURRENT IN ONE WIRE
MAY "INDUCE" VOLTAGE IN THE WIRE NEXT TO IT. ON
CHEVYS, THIS MEANS #5 AND #7 WIRES.

RESULT: PLUGS FIRE OUT OF SEQUENCE PRODUCING A
MISS OR SPIT BACK. THIS BLUE STREAK SERVICE
BULLETIN #92 TELLS ALL ABOUT IT...



GOT IT, SHERLOCK. I'LL REROUTE THE PLUG
WIRES OF THE TWO LEFT REAR CYLINDERS SO
THEY WON'T RUN NEXT TO EACH OTHER, AND
SET THE SPARK PLUG GAPS
CORRECTLY.

MECHANICS, YOU
CAN RELY ON
BLUE STREAK
SERVICE BULLETINS
FOR HELPFUL IGNITION
INFORMATION.

FREE: WRITE FOR BLUE STREAK SERVICE
BULLETIN #92 "THIS AND THAT" TO:
STANDARD MOTOR PRODUCTS, INC.,
37-18 NORTHERN BLVD., LONG ISLAND CITY 1, N.Y.



YOUR MOTOR'S
RUNNING
SMOOTHLY
NOW,
MISS FYRE...

NO WONDER 40,000
BUSY DEALERS SAY,
"BLUE STREAK IGNITION
IS BETTER FOR YOUR
BUSINESS!"

WORLD'S FOREMOST
HEAVY-DUTY
IGNITION LINE

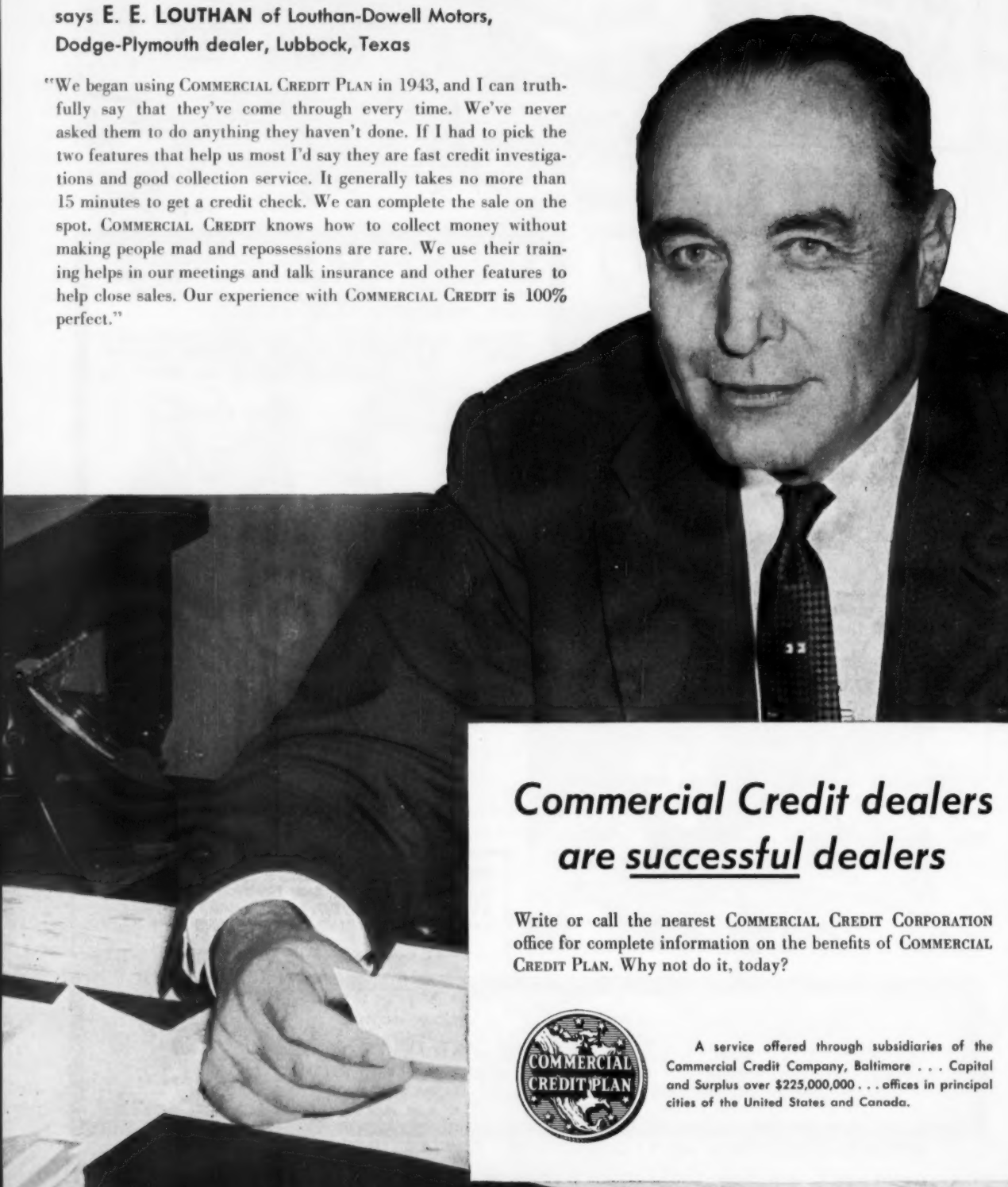
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REGULATORS • SWITCHES • COILS • CONDENSERS • CONTACT POINTS • WIRE and CABLE

"...they've come through every time..."

says **E. E. LOUTHAN** of Louthan-Dowell Motors,
Dodge-Plymouth dealer, Lubbock, Texas

"We began using COMMERCIAL CREDIT PLAN in 1943, and I can truthfully say that they've come through every time. We've never asked them to do anything they haven't done. If I had to pick the two features that help us most I'd say they are fast credit investigations and good collection service. It generally takes no more than 15 minutes to get a credit check. We can complete the sale on the spot. COMMERCIAL CREDIT knows how to collect money without making people mad and repossessions are rare. We use their training helps in our meetings and talk insurance and other features to help close sales. Our experience with COMMERCIAL CREDIT is 100% perfect."



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← Circle 351 on Inquiry Card, facing 3rd Cover

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for full
information

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AUGUST 1959

Vol. 78, No. 9

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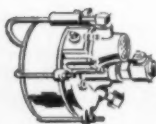
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that "plus"
of extra
protection



Talk about resistance to heat! Here's a heavy-duty brake fluid with a boiling point of 390 degrees—higher than the current SAE specifications.

MoPar Hi-Temp fluid helps provide new braking safety for today's most powerful cars. You can use it with complete confidence that your customers will be satisfied. And you can turn a neat profit, too.

For prompt delivery of genuine MoPar parts and accessories, call your MoPar Wholesaler or your Plymouth, Dodge, De Soto, Chrysler or Imperial dealer.



Sell the line that keeps your customers sold on you—MoPar



CONTROL!

and in trucks,
tractors,
and cars...

Oil Control!

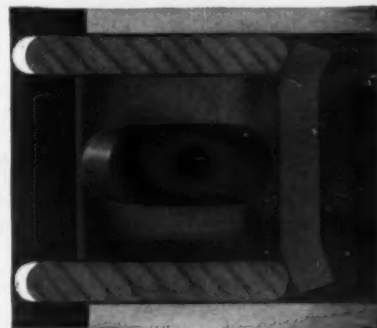
Sealed Power KromeX piston ring sets
with stainless steel oil rings control oil!

New design...new material...fully tested! These rings
come in fast, control oil even under high vacuum
conditions or in tapered and out-of-round bores.

JUST ONE OF THE REASONS WHY

Oil passing around the back of the
ring under high vacuum or deceler-
ation is one of the main causes of
smoking. Sealed Power stainless
steel oil rings stop oil going around
the back of the ring because of their
side-sealing design.

The angle of the shoulders on
which the rails depend for outward
radial pressure produces the side
pressure which holds the rails
snugly against the side of the
groove. Result: no passage of oil
around the ring—no smoking.



SEALED POWER CORPORATION • MUSKEGON, MICHIGAN

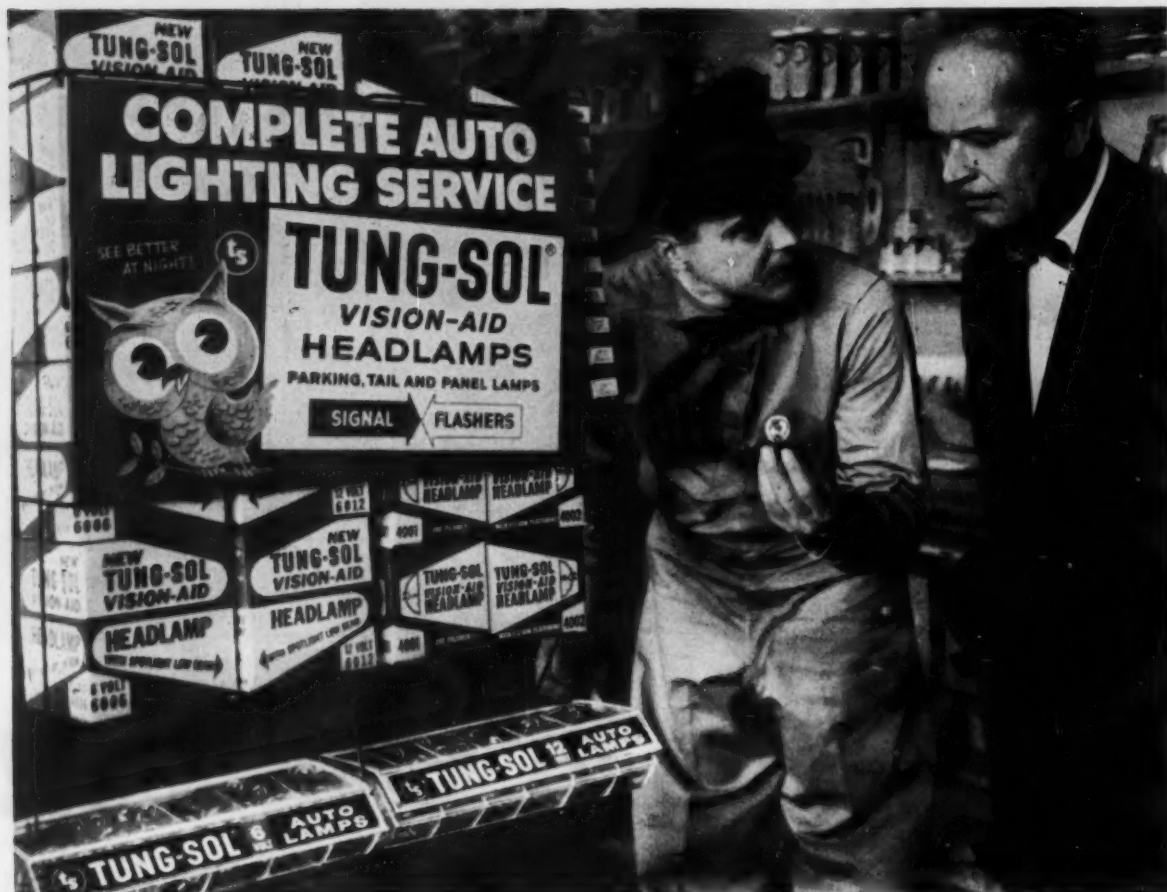
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BEST FOR RE-BORE!



Insist on the best...why settle for less



FREE* Tung-Sol Lamp Merchandisers move miniatures

Eye-Catching Cabinets Keep Lamps Clean, Collected and Convenient . . . Service 98% of Replacement Needs . . . Streamline Stocking . . . Spur Sales.

There's a potential miniature lamp replacement sale in every car socket — up to 48 in some of the newer models and the number grows! Each of these sturdy plastic merchandisers contains just the right amounts of the necessary type lamps — 70 12-volt, 100 6-volt — to service 98% of replacement requirements . . . and there's no charge for the cabinets! Compartmented for at-a-glance selection and inventorying, the merchandisers end hunting among dusty boxes, overstocking and wondering when to reorder!

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#70	12-Volt	#100	6-Volt
10 type	53	10 type	51
20 type	57	20 type	55
10 type	67	30 type	63
20 type	1034	10 type	1129
10 type	1073	20 type	1154
		10 type	1158

*there's money
in miniatures!*



*Merchandisers free with each assortment.

ts TUNG-SOL[®] MINIATURE LAMPS

*Talk to
the man
who says-*



He has the most powerful brake profit story you've ever heard!

No frills, no blue-sky promises—but a tightly cinched story based on the dollars-and-cents value of brake service to *you*. Learn how to pull in more customers, make more sales—get \$14 for every 10 minutes you spend selling brake service. Learn how to do it—again and again—with Grey-Rock P-L-S.

Your Grey-Rock jobber salesman has this story for you. Ask him for full details.

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- in the Saturday Evening **POST**
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BALANCED BRAKE LININGS

BALANCED BRAKESETS • TRUCKSETS • BRAKE BLOCKS • VEE-LOK® CLUTCH FACINGS

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Chevy's best
to do business with
...sales records prove it!



CHEVROLET TASK-FORCE 59 TRUCKS

Sky-rocketing sales figures tell the story: Chevrolet's Task-Force 59 trucks offer more of what it takes to boost profits for both truck buyers and truck sellers!

136,364 sales registered during the first 5 months of '59 . . . 25,672 more than the second place truck!*

That's the way the Chevrolet truck sales picture is shaping up this year; the new Task-Force line is rolling ahead like never before, literally running away from the field.

Of course, sizzling sales paces are nothing new to Chevy. Records show that these trucks have been the runaway favorites among truckers each production year, continuously, since 1937.

When a truck builds boosters so efficiently for so long, there can only be one reason: *It's the truck proved most efficient at boosting profits.*

That's a fact, whether you use Chevy trucks or sell them! Chevrolet Division of General Motors, Detroit 2, Mich.

*Official registrations for all trucks as compiled by R. L. Polk & Co. All states through May 31, 1959 except Oregon. Oregon through April 30, 1959.

The **BIG** reason why
GOLDEN GLIDE

Shock Absorbers
give your customers unsurpassed performance

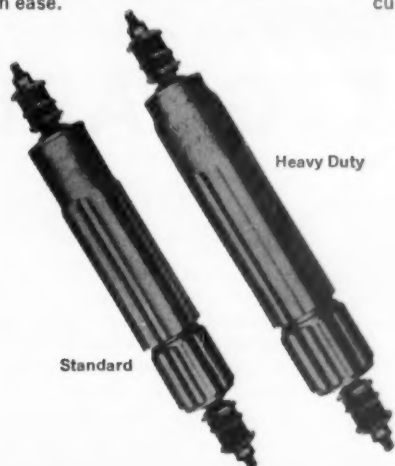
AUTOMATIC 3-WAY ACTION



SMOOTH ROAD—Golden Glide in low action takes up the small bumps with ease.

NORMAL ROAD—Golden Glide shifts from low to middle action instantly, cushioning bounce and harsh jolts.

ROUGH ROAD—Golden Glide in high-speed action turns the roughest, bumpiest road into a smooth-as-satin ride.



The simplest, most convincing story on shocks you've ever heard is the Golden Glide quality-performance story. Your customer is bound to like shocks that give him the *same, even* ride on any kind of road, at any speed. Within the heavy gold-finished steel walls of the Golden Glide shock, three independent special coil-spring valves permit *instant automatic* self-adjustment to meet every operating condition—rough, normal or smooth—on all cars, whatever the suspension system. Its rugged dependability assures your customers of thousands more miles of ultra-smooth driving over every kind of terrain.

Sell and install standard Golden Glide or heavy duty Golden Glide for heavier cars and station wagons. Just an hour of your time earns you more than \$15 profit. Call your Golden Glide jobber today for full details.

GOLDEN GLIDE

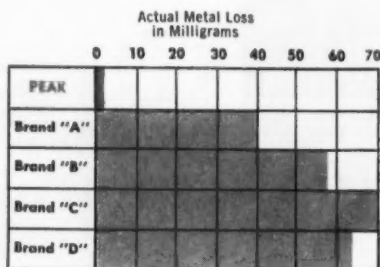
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THE GOLDEN GLIDE SHOCK ABSORBER CO.

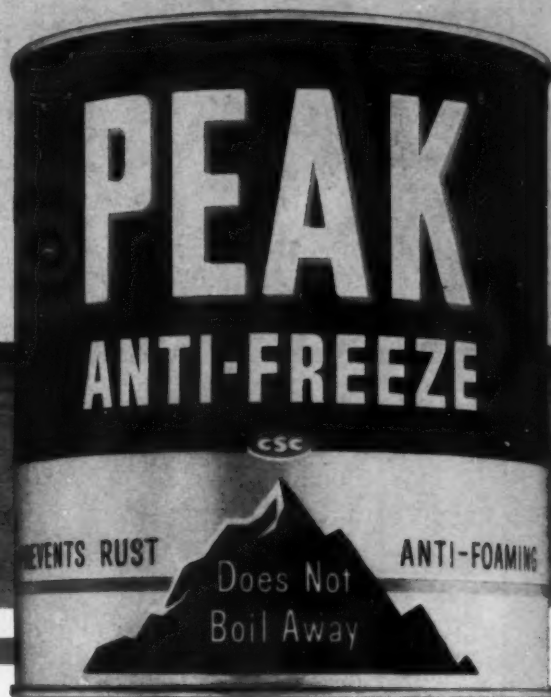
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PEAK with RUST-GUARD won't freeze up, won't boil away, won't harm gaskets or rubber hose. It won't mar or mark the finest car finish. It won't creep, seep or leak from a system tight enough to hold water. PEAK gives guaranteed all-winter, all-weather anti-freeze protection.

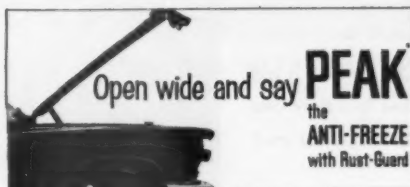


HERE YET FREEZE FOR THEM IS!



And behind the Product . . . Plenty of Sock, Sizzle and Sell!

PEAK Sock: Four-color ads in "LOOK" and in "THE SATURDAY EVENING POST" —reaching over 61 million (!) readers with the years-ahead PEAK sales story.



PEAK Sizzle: A powerful outdoor billboard — a "stopper" that will be seen by millions of anti-freeze buyers in key markets from coast to coast.

PEAK Sell: First and foremost, emphasis is focused on the benefits of having anti-freeze installed by the expert dealer at the price of \$3.25 per gallon. And then, on top of that — a new and competitive pricing plan designed to help service dealers recapture their rightful share of business from the chain stores and supermarkets with an "install-it-yourself" price of \$2.39 per gallon.

PEAK Point of Sale: A hot dealer kit that contains only the kind of merchandising tools that have proven their value as sales getters! Expert Dealer Sign . . . Wall Chart . . . Billboard Banner . . . Product Banners . . . and Wheel Tags — in other words, the works!



The Only Thing PEAK Needs is You!

The new cars aren't here yet but the anti-freeze is! It's PEAK — the quality anti-freeze with the years-ahead formula. And it's all set for the '60's. So is the advertising and promotion program. **But the most important ingredient is you!** Why not order PEAK now from your supplier. Be way ahead with the years-ahead anti-freeze —

PEAK ANTI-FREEZE with RUST-GUARD

Don't Forget NOR'WAY®

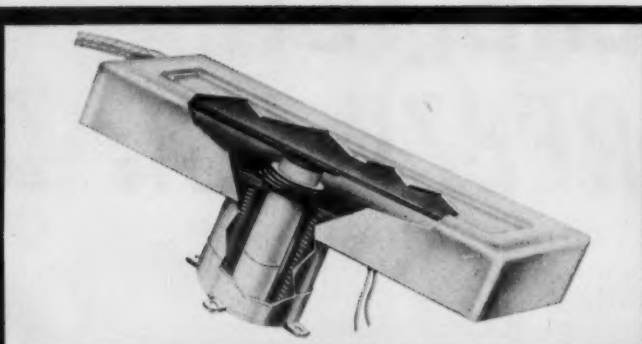
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developed by **COMMERCIAL SOLVENTS CORPORATION**

260 MADISON AVENUE, NEW YORK 16, N. Y.

Circle 355 on Inquiry Card, facing 3rd Cover



GLIDE CONTROL is a perfected, precision-made electronic instrument that holds speed constant by precisely measuring fuel-flow. It's been proven efficient and fool-proof in rigid performance tests by leading automotive engineers.

CHUCK NERPEL, Technical Editor of MOTOR TREND, makes this report in the July issue. "Our tests prove that GLIDE CONTROL is simple, rugged, easily installed and reasonably priced. We take great pleasure in awarding the MOTOR TREND Seal of Approval to GLIDE CONTROL, a product that does its job well."



IT'S HERE...FULLY ROAD-TESTED AND APPROVED

NEW ELECTRONIC GLIDE CONTROL*

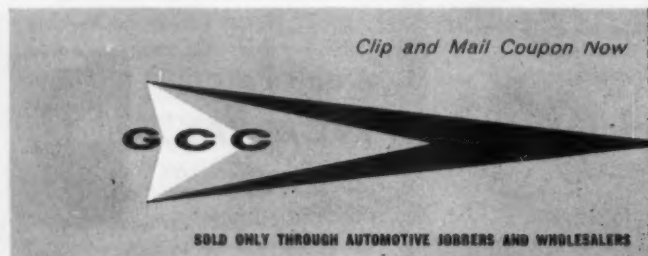
THE ONLY DEPENDABLE, LOW-COST CONSTANT SPEED CONTROL

- **NATIONALLY ADVERTISED AND PROMOTED!** Consumer magazines! Trade Magazines! Month after month, GLIDE CONTROL prospects are pre-sold through advertising and publicity. And there's more promotion to come!
- **PROFIT PLUS!** GLIDE CONTROL retails for \$29.50 with a big built-in profit for you. Installation is simple, takes less than one hour in ANY car. Your installation charge is PROFIT PLUS for you!
- **UNMATCHED PERFORMANCE!** GLIDE CONTROL cuts gasoline use up to 25% —pays back its full cost within a few months. Relieves "throttle-foot" fatigue. Maintains constant driving speed automatically. Provides safe toe-tip control.



WASTEFUL "PEDAL PALPITATION" means wasted rpm, wasted gasoline plus strain on driver's right leg. New electronic GLIDE CONTROL stabilizes fuel-feed and speed... guarantees fuel savings... enables driver to arrive fresh and relaxed from cross-country and thruway trips.

*Trade Mark



Clip and Mail Coupon Now

GLIDE CONTROL CORP.
1608 Centinela Ave., Inglewood, California
Please rush details on GLIDE CONTROL performance.

Department MA-8

Name _____

I am a:
(check one)
☐ distributor
☐ retailer

Name of Firm _____

Address _____

City _____ State _____

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USING A METALITE® GREEN-BAK FIBRE DISC IS A FAST WAY TO REMOVE RUST AND LOOSE PAINT, TO FILL AND CUT DOWN METAL.

GREEN-BAK discs work faster

This needle-sharp abrasive disc resists loading, cuts faster, lasts longer and leaves a super-fine surface to give that factory-finish to repaint jobs. You will see the difference, when you try METALITE "GREEN-BAK" Discs. Ask your Behr-Manning representative or write to Dept. MA-8.

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TROY, NEW YORK

A DIVISION OF NORTON COMPANY



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Take my word for it...

... Pedrick Formflex Chrome Piston Rings are tops for *every* job. These rings are really tough ... will deliver premium performance and long life for my most exacting customers. And for my budget-minded customers, Pedrick also makes a darned good economy ring set. Either way, I never have to worry—I can always be sure of doing the job right with Pedrick. See your Pedrick jobber.

WILKENING MANUFACTURING CO., Philadelphia 42, Pa. In Canada: Wilkening Manufacturing Co. (Canada), Ltd., Toronto 2.

DEPEND ON

Pedrick

FOR THE RIGHT RING JOB

A.S.I.A. holds HISTORIC MEETINGS

*A.S.I.A.'s first meeting of boards and
committees lay foundations
for services and organization*



**Victor L. Toft, Chairman of
the Board of Directors**

THE newly-formed Automotive Service Industry Association, created from the former M.E.W.A. and N.S.P.A., has concluded a historic series of meetings of its boards and committees with assurance to members of board, expanded services and representation. The meetings were the first of such held. They took place at Hot Springs, Virginia, June 1 through 4.

Under the A.S.I.A. setup, the Association is comprised of two basic divisions: the Wholesalers Divisions and the Manufacturers Division. The latter includes warehouse distributors and parts rebuilders. A.S.I.A. recently announced that J. L. Wiggins has been appointed executive secre-

tary of the Wholesalers Division; B. W. Ruark has been appointed executive secretary of the Manufacturers Division.

A.S.I.A. has several permanent committees. Each functions for a specific purpose. One is a Membership Committee. It first reviews all applications for membership, makes its recommendations on each to the respective boards of each division for final action. The Marketing Research Committee might be called the "breeding ground" for many new services. The Rebuilders Division and Warehouse Distributors Division both have executive committees which discuss programs domestic to their segments of the industry.

In A.S.I.A. the Board of Directors is made up of eighteen wholesalers and nine manufacturers. This maintains the 2 to 1 ratio which was the basis of agreement between the former N.S.P.A. and M.E.W.A. Each division, however, acts independently on matters indigenous to its segment of the industry. Thus, the wholesaler directors meet alone as the Wholesalers' Board of Managers; The manufacturer directors assemble as the Manufacturer's Board of Mana-

gers. Both groups meet at the same time, independently. The next day they combine as the Board of Directors to act jointly upon the recommendations made by the various committees.

Digests of major topics and plans of action, as discussed by the various committees and boards, are reported in the following paragraphs.

One of the first items on the order of business at the meeting was to give final action upon all wholesalers applications for membership.

(Continued on next page)



**J. A. Bryant, Chairman
Wholesalers' Bd. of Man-
agers**

A.S.I.A. MEETINGS Continued

The subject of A.S.I.A. cooperation with local, state and regional automotive wholesaler associations received the careful attention of the Board. Further discussions are to be held with the organizations' executive secretaries to work out an effective method of cooperation.

Membership of A.S.I.A. in the National Association of Wholesalers was approved. N.A.W. is an affiliation of national wholesaler associations. Its headquarters are in Washington, D.C. Its purpose is to "Speak Up for Wholesaling!" in numerous ways.

Members of the Wholesalers' Board of Managers of A.S.I.A. are: J. A. Bryant, chairman, Motor & Electric Supply Co., Inc., Bowling Green, Ky.; H. R. Askins, Mesa, Ariz.; D. Ned Brown, Brown Motor Supply Co., Bedford, Penna.; J. F. Creamer, Wheels, Inc., New York, N.Y.; J. T. Davis, The Motor Parts Co., Corpus Christi, Texas; J. P. Farber, Chapin-Owen, Rochester, N.Y.; J. W. Foster, The Foster Auto Supply Co., Denver, Colo.; A. S. Hatcher, A. S. Hatcher Co., Macon, Ga.; E. A. Littrell, Littrell Parts, Medford, Oregon; Rollin McBurney, Boggs and McBurney Auto Parts, West Los Angeles, Calif.; H. McMahon, Taylor, Pearson & Carson (Canada) Ltd., Edmonton, Alberta, Canada; John F. Midyette, Standard Parts Corp., Richmond, Va.; John Reynolds, Straus-Frank Co., San Antonio, Texas; E. H. Rogers, Jr., United Warehouse, Inc., Jacksonville, Fla.; A. J. Thompson, Piston Service, Inc., Seattle, Washington; V. L. Toft, Sidles Co., Omaha, Neb.; Henry Trauscht, Evanston Auto Co., Evanston, Ill.; and Paul M. Woolwine, Woolwine Supply Co., Pratt, Kansas.

Manufacturers' Board of Managers

Among the top items carefully studied at the Manufacturers'



**Les A. Thayer, Chairman
Manufacturers' Bd. of Managers**

Board meeting was a review of many proposed new services for manufacturers. For example: a Credit Reporting Service, Employer-Employee Relations, Buyers Guide, Seminars for Manufacturers' Salesmen, Cost Comparison Studies, and many others.

An extensive review was made of A.S.I.A. activities and planning concerning the 1960 IASI Show next February at the New York Coliseum. C. S. Rogers, Chairman of the Joint Operating Committee for the Show reported the committee's first meeting resulted in the appointment of special committees on Publicity, Finance and Space Contracts.

Members of the A.S.I.A. Manufacturers' Board of Managers are: Les A. Thayer, chairman, Belden Manufacturing Co., Chicago; J. A. Anderson, A. C. Spark Plug Div., GMC, Flint, Mich.; M. W. Bazner, Sr., Ammco Tools, Inc., North Chicago, Ill.; Edward Gammie, Victor Mfg. & Gasket Co., Chicago, Ill.; C. A. Klaus, MarPro, Inc., Chicago, Ill.; D. D. Minshall, Gates Rubber Co., Denver, Colo.; Gene P. Robers, Carter Carburetor Div., ACF Industries, Inc., St. Louis, Mo.; C. S. Rogers, P & D Mfg. Co., Long Island City, N.Y.; and Don H. Teetor, Perfect Circle Corp., Hagerstown, Ind.

Warehouse Distributors Committee

One of the first orders of business saw the group carefully review applications for membership in the Division, for recommendations on each to the Board of Directors for final action. The Committee also discussed a distinctive membership emblem for A.S.I.A. warehouse distributor members.

Members of the A.S.I.A. Warehouse Distributors Committee are: Harry D. Rothman, chairman, Seaport Automotive Warehouse, Oak-

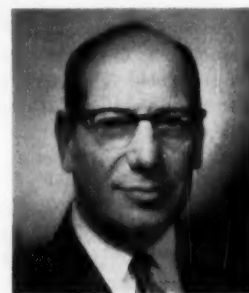


**Harry D. Rothman, Chairman
Warehouse Distributors
Committee**

land, Calif.; Ronald Kumin, Lee Motor Products, Inc., Cleveland, Ohio; Thomas S. Perry, Thomas D. Perry Co., Inc., Atlanta, Ga.; A. P. Walter, A. P. Walter Co., Chicago, Ill.; and John M. Yantis, Motive Parts Warehouse, Inc., Fort Smith, Ark.

Rebuilders Committee

As in the above committee, the first item of action taken was a careful review of applications for



**Albert S. Holzwasser, Chairman
of the Rebuilders Committee**

membership in the Rebuilders Division, for recommendations on each to the Board of Directors for final action. A distinctive membership emblem for members of this Division was also discussed.

The Committee made a number of important decisions, among them: clarification of such nomenclature as "remanufactured" and "factory rebuilt"; support of efforts on the part of the Industry-Wide Committee for Removal of Discriminatory Automotive Excise Tax; and the incorporation in price sheets of information designating parts discontinued and price changes.

Members of the A.S.I.A. Rebuilders are: Albert S. Holzwasser, chairman, Arrow Armatures Co., Boston, Mass.; Ralph S. Bishop, Exchange Parts Co., Fort Worth Texas; Irving Chafetz, Kimco Auto Products, Memphis, Tenn.; C. A. Dunmore, Rebuilders, Inc., Garland, Texas; and Frank Schwartz, Atlas Automotive Products, Inc., Brooklyn, N.Y.

Marketing Research Committee

In the A.S.I.A. Marketing Research Committee, industry wholesalers and manufacturers have an opportunity to sit down together and discuss interrelating problems which can best be solved through mutual cooperation and understanding.

At its initial meeting, the Committee was unanimous in its recommendation that the major services

of both former associations be continued and expanded under the banner of A.S.I.A. A few of the items included in this extensive list of continuing services are: "Financial Operation and Performance Analysis for Automotive Wholesalers . . . with Leading Lines Study," the "Selling Job" magazine for wholesalers' salesmen, expansion of the "Automotive Instruction in Our Schools" program, "Related Selling" plan for wholesalers, "Catalog Standardization," and others.

Members of the A.S.I.A. Marketing Research Committee are: Allan L. Levine, chairman, Towers Motor Parts Corp., Lowell, Mass.; R. S. Heidenheim, McQuay-Norris Mfg. Co., St. Louis, Mo.; J. A. Anderson, A. C. Spark Plug Div., GMC, Flint, Mich.; Norman P. Cohen, Cohen Auto Parts Co., Inc., Erie, Penna.; J. P. Farber, Chapin-Owen, Inc., Rochester, N.Y.; Selby F. Greer, Van Norman Automotive Equipment Co., Springfield, Mass.; W. D. Henderson, Henderson Brothers, Sacramento, Calif.; C. A. Klaus, MarPro, Inc., Chicago, Ill.; Ed Kukuk, United Auto Sales Inc., Aurora, Ill.; Edward J. Perreault, Perrault Auto Parts, Inc., Troy, N.Y.; Edgar Rogers, Jr., United Warehouse, Inc., Jacksonville, Fla.; B. E. Smith, Crow-Burlingame Co., Little Rock, Ark.; T. C. Watkins, Watkins Automotive Supply Co., Midland, Texas; L. T. White, Jr., Motor Bearings & Parts Co., Cleveland, Ohio.

Membership Committee

Part of the Membership Committee's work is to relieve the boards of detailed screening of applications for membership in the various divisions of the Association. Following a careful review of each applicant's qualifications, including endorsements by local wholesaler members—in the case of a wholesaler applicant—and by manufacturer members in the same product group, the Committee makes its recommendations to the respective boards for their final action.



Chester Klein, Chairman of the Membership Committee

Serving on the A.S.I.A. Membership Committee are: Chester Klein, chairman, Republic Auto Parts, Inc., New York, N.Y.; D. Ned Brown, Brown Motor Supply Co., Bedford, Penna.; Frank A. Brusek, Motor & Axle Parts Service, Inc., Chicago, Ill.; Ralph Casey, Associated Equipment Corp., St. Louis, Mo.; E. T. Duffy, The Electric Auto-Lite Co., Toledo, Ohio; Saul J. Ganz, Maplecrest Battery & Ignition Co., Maplewood, N.J.; William Hedges, Bill Hedges Auto Parts, Portsmouth, Ohio; C. Howard Hout, Keenan Auto Parts Co., Albany, Ga.; Irving Lerner, Southwest Auto Parts Co., Inc., St. Louis, Mo.; C. H. LeFevre, Sealed Power Corp., Muskegon, Mich.; Tim Lipschultz, M & L Motor Supply Co., St. Paul, Minn.; D. D. Minshall, Gates Rubber Co., Denver, Colo.; Wayne Rapp, Walker Marketing Corp., Racine, Wisc.; Norman Spitzer, Spitzer Electrical Co., Denver, Colo.; and Leslie W. Wyre, Car Parts Co., Los Angeles, Calif.

Board of Directors

Culminating the four-day series of committee and board meetings is the combined, wholesalers and manufacturers, Board of Directors meeting on the final day. A.S.I.A. president, Victor L. Toft, is chairman of the board.

Although A.S.I.A. is built upon a foundation made strong by the decades of experience of both the former M.E.W.A. and N.S.P.A., it is understandable that an Association as huge as A.S.I.A., so newly-created, will require a period of

(Continued on next page)



Allan L. Levine, Chairman Marketing Research Committee

time while the rough spots in organization and policy are ironed out. Much time at this Board of Directors meeting was devoted to this task. A great deal of success was reported. The job is made more difficult by the Association's determination to provide uninterrupted service and representation to its members. It is to the credit of A.S.I.A.'s crack headquarters staff that this is being accomplished.

Even so, the Board of Directors managed to turn its attention to several matters of wide interest to members and the industry. For example, a strong resolution with regard to O.E.M. sales by replacement parts manufacturers was adopted.

The Association has also embarked upon a note-worthy program entitled, "Deficit Spending vs. Balanced Budget," involving remedial steps toward stopping the nation's inflationary spiral, which many experts feel is the Number One danger today to the United States. Other matters discussed by the board included plans for the Association's 1960 national convention in New York next February.

And so a new era begins in the automotive service industry. M.E.W.A. and N.S.P.A. pass into history. In their place steps the long-desired Automotive Service Industry Association. The united front is here. Their sleeves are rolled up; the work is being done!

A.S.I.A. is off the ground!

NEWSETTES

In Congressional Record

On July 15, the Honorable Hale Boggs, Congressman from Louisiana rose in the House of Representatives. He addressed the Speaker of the House to extend his remarks into the Congressional Record.

Permission granted, Congressman Boggs included into the record the

The marketing of anti-freeze has changed drastically in the past decade. Sources outside the regular channels of automotive distribution have made strong inroads in anti-freeze sales. Cash and carry, do-it-yourselfers bought 45 per cent of the anti-freeze from non-automotive outlets, principally on price alone.

Here is a typical example of how the automotive wholesaler has surrendered nearly half of his market to outside competition. It could be an indication of how brand preference is disappearing.

Be sure to read "Arresting the Anti-Freeze Market Thief" beginning on page 22 of this issue.

It is an important discussion of the anti-freeze merchandising problem and what nationally known brand makers are doing about it.

The automotive wholesaler would do well to remember that he can only sell nationally known brands through regular channels of automotive distribution. He can reach car owners through recognized service retailers with availability of merchandise.

article "What's Wrong With The Highway Program," an article by Frank P. Tighe, which appeared in the June issue of MOTOR AGE.

The article appears in the Congressional Record of July 16, on page A 6168.



Congressman Boggs

Hale Boggs, Democrat, represents the second Congressional district in Louisiana, which is a part of the City of New Orleans. A graduate of Tulane University with an LL.B. degree in 1937 Boggs served as the youngest Democrat in the 77th Congress. After a distinguished World War II career, he was elected to the 80th Congress in 1946 and subsequently re-

elected to the 81st through the 86th Congress.

Appointed to the Ways and Means Committee in 1949, he has distinguished himself in many ways, including his leadership in highway financing.

E.T.I. Spells It Out

At the annual Equipment and Tool Institute general meeting, with over 75 per cent of its membership in attendance, its trade show policy was announced.

L. F. Woolman, executive manager of E.T.I. indicated that a full discussion of various types of automotive product trade shows took place. This included the rotating international exhibition sponsored by the two national associations, A.S.I.A. and M.E.M.A.

E.T.I. has resolved that the Institute will refrain from approving any automotive product trade show. Exception: the one annual national exhibition sponsored A.S.I.A. and M.E.M.A. Further stipulation was that the show be held in connection with the annual convention of the Automotive Service Industry Association and the annual meeting of the Motor and Equipment Manufacturers Association.

THE PULSE OF

AUTOMOTIVE BUSINESS

Automotive Wholesalers' Sales and Inventories

Data from Bureau of Census, Dept. of Commerce

Region	Sales % of Change			Inventories % of Change	
	May 1959 from May 1958	May 1959 from Apr. 1959	5 Mos. 1959 from 5 Mos. 1958	May 1959 from May 1958	May 1959 from Apr. 1959
New England	+28	-5	+16	+6	+1
Middle Atlantic	+14	-1	+9	+6	-1
East North Central	+13	0	+11	+15	+2
West North Central	+9	-4	+13	+4	+2
South Atlantic	+13	0	+15	+5	+3
East South Central	+11	+1	+15	+5	-2
West South Central	+8	-2	+15	+8	+4
Mountain	+3	-9	+19	+4	-2
Pacific	+6	-2	+15	+13	+5
United States	+5	-1	+5	+5	+1

Monthly Sales of Automotive Jobbers, incl. Tire and Tube Wholesalers*

All data are in Millions of Dollars

Month	1959	1958	Per Cent Change
Jan.	\$ 352	\$ 350	+ 0.57
Feb.	333	324	+ 2.78
Mar.	375	337	+11.27
Apr.	362	368	+11.27
May	..	371	+ 6.52
June	..	376	+ 4.85
July	..	387	..
Aug.	..	379	..
Sept.	..	389	..
Oct.	..	426	..
Nov.	..	379	..
Dec.	..	391	..
Total—Year.....	\$4,477
Total—5 Mos.....	\$1,841	\$1,790	+ 5.20

Monthly Sales of Franchised Car Dealers*

All data are in Millions of Dollars

Month	1959	1958	Per Cent Change
Jan.	\$ 2,531	\$ 2,357	+ 7.39
Feb.	2,450	2,073	+18.19
Mar.	2,821	2,297	+22.16
Apr.	2,942	2,384	+23.41
May	3,033	2,469	+21.86
June	..	2,446	..
July	..	2,306	..
Aug.	..	2,212	..
Sept.	..	1,929	..
Oct.	..	2,055	..
Nov.	..	2,208	..
Dec.	..	2,618	..
Total—Year.....	\$27,373
Total—5 Mos.....	\$13,877	\$11,600	+19.63

Monthly Sales of Gasoline Service Stations*

All data are in Millions of Dollars

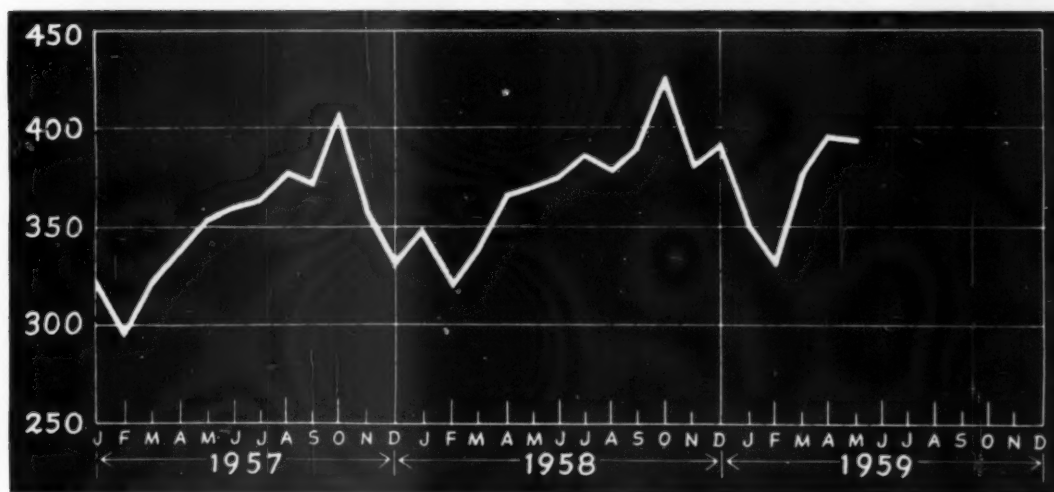
Month	1959	1958	Per Cent Change
Jan.	\$ 1,282	\$ 1,209	+6.04
Feb.	1,197	1,122	+6.69
Mar.	1,318	1,214	+8.57
Apr.	1,348	1,282	+7.67
May	1,427	1,335	+6.89
June	..	1,331	..
July	..	1,410	..
Aug.	..	1,448	..
Sept.	..	1,346	..
Oct.	..	1,384	..
Nov.	..	1,338	..
Dec.	..	1,369	..
Total—Year.....	\$15,756
Total—5 Mos.....	\$6,572	\$6,132	+7.17

* Estimated by the Bureau of the Census.

MONTHLY SALES OF AUTOMOTIVE WHOLESALERS—

INCLUDING TIRE AND TUBE WHOLESALERS

(All Data in Millions of Dollars)





Newly elected officers of M.A.W.A. are seated, left to right: treasurer, Harlan Yeager, Auto Parts Co., Ann Arbor; president Robert McNally, Battle Creek Motor Parts Co., Battle Creek; vice president, William Hamlin, C. E. Hamlin Co., Jackson; Standing are the newly elected director, Loris Welch, Forncrook Auto Supply, Flint and executive secretary, Maury Mayer.



A general sales meeting was held recently in Pittsburgh with all the salesmen and store managers of Pittsburgh Auto Equipment Company. On the podium is W. H. Teeters, general manager. He is shown introducing Joe Giebe and Edward J. Roelandt of the Moog factory to the group.

Below, left to right: Milt T. Obee, Obee-McCord, manufacturers representative; Albert Joseph, advertising manager, The AP Parts Co.; George "Red" Feloni, Sealed Power Corporation; Dave Phillips, Chap Associates, warehouse distributor; center rear, William Banta, sales manager, American Hammered Division, Sealed Power Corp.





Automotive Wholesaler Trade Assn. Executives meet in Oklahoma City. Meeting was conducted by Tom Payne, Automotive Wholesalers of Oklahoma. Mr. Payne is a member of the Oklahoma State Senate.



Victor L. Toft, president of Automotive Service Industry Assn. and B. W. Ruark, executive secretary of A.S.I.A.'s manufacture, parts re-builder and warehouse distributor division were guest speakers.

(Below) Newly elected officers are (l. to r.) A. Glen Gaffney, Berkeley, Calif., treasurer; John Rooney, Montgomery, Ala., vice-president; Jules Lamothe, Baton Rouge, La. president; and George Wilson, Kentucky, secretary.



Standing Tom Payne, Okla., H. V. Bodine, Fla., Keith Broyles, Tenn., W. L. Wodica, Ill., Maury Mayer, Mich., Jules Lamothe, La., H. L. Bellmer, Ohio. Seated, l. to r., A. G. Gaffney, Calif., George Wilson, Kentucky, G. C. Morris, Tex., J. W. Rooney, Ala.



Motor Age's

WHO'S WHO



Blair Crofut, photo, has been appointed manager of the Denver, Colorado sales district of The Electric Auto-Lite Company. **Harold Shay** has been named district sales manager for Washington, Ore. and Northern Idaho for the company.

G. E. Smith will head the Original Equipment Division of Muskegon Piston Ring Company. **E. C. Chatfield** becomes sales manager of the Replacement Division of the company.

W. W. (Win) Harris has been appointed manager of the west coast office of the American Bosch Arma Corporation to replace **Norton C. Sather** who has been assigned as division manager of the recently acquired Ensign Carburetor Co., Calif.



James N. F. Reynolds, Jr., has been appointed vice president-manufacturing for Van Norman Industries, Inc. He is a specialist in the fields of industrial production, planning and control.



Ernst G. Heeren, photo, formerly managing director of Permatex Company, Inc., has been appointed vice president. **Edgar S. Taelman**, formerly controller, succeeds Heeren as managing director.

William B. O'Daniel has been appointed a marketing specialist on the central office staff of United Motors Service division of General Motors.



John Redwine, left, and **Norman Riechers** have been appointed eastern sales manager and western sales manager respectively of the replacement division of the Ramsey Corporation.

R. F. Ollar, has been appointed to the newly created position of government products manager for the Carter Carburetor division of ACF Industries, Incorporated.

Orville Boggs has been appointed eastern regional manager of Clayton Manufacturing Company, Calif.

Caleb A. Shera has been appointed to the position of sales manager of the newly-formed ACCO Power Products Division, American Chain & Cable Co., Inc.

Two new territory managers have been appointed by Merit Mufflers. **Bob Black** will serve the southeastern states and **Robert J. Moore** will cover portions of the north central states.

Kenneth M. James has been named by Arvin Industries, Inc. as sales manager of the firm's automobile replacement parts division. **Robert A. Bodine** has been named promotion manager of automotive after-market products.



V. F. Thompson has been appointed to the newly created position of service sales manager of the Carter Carburetor division of ACF Industries, Incorporated. He formerly was service manager.

Donald Harper has been appointed territory manager of northern California, and Nevada, for The AP Parts Corporation. Other new territory managers are **Al Richards**, southern Virginia and northeastern North Carolina; **Henry W. "Hank" Scoggins**, Texas; and **James E. Morton**, Oklahoma and Arkansas.



Van Norman Machine Tool Co. and **Van Norman Automotive Equipment** divisions of Van Norman Industries have consolidated into one firm known as Van Norman Machine Co. **Paul W. Leming**, photo, will head the new company. **Selby F. Greer** was named executive vice president in charge of sales for the merged company.



Robert V. Richards has been appointed regional manager, Petroleum TBA sales for the Schrader division of Scovill Manufacturing Co., Inc. He has been with the company for two years as a district representative.



Paul J. Collingsworth has been appointed district manager of the Walker Manufacturing Company's Memphis district. He joined the company in 1953 and served as territory manager in Oklahoma and Houston, Texas.

newscoop

Model Changeover Time
6-Barrel Carburetors?
Self-Adjusting Brakes
Car Mfrs. For Safety
Hertz Buys Small Cars
Rear-Engine Facts
Natl. Auto Show Grows

In the days ahead HERE'S WHAT TO LOOK FOR !!!

(Items gathered and edited by Ed Janicki, Ray Stroupe and Bill Montgomery)

Assembly Lines Shut Down For Changeover

THE LAST 1959 CAR COMES OFF ASSEMBLY LINES at the end of this month.... Chrysler shut down last month to make way for 1960 models.... Ford and General Motors stop production this month.... Marks earliest shutdown for model changeover in history.

All production lines will be in full blast during September as factories fill dealer pipelines with the 1960 cars.... October will be a hectic month as new-car announcement season gets underway.... According to present schedules, all cars, with possible exception of Chrysler's small Valiant, will be out by mid-October.



Small Edsel B Due In January

SECOND WAVE OF SMALL CARS carrying nameplates of medium-priced class, will start spilling from Detroit in January.... That's the month Edsel dealers reportedly now are being promised their smaller version job, the 114-inch wheelbase Edsel B.

Crash program started within past few weeks.... Car originally was scheduled for introduction next May or June.... Factory was hoping to put Edsel B under dealers' Christmas tree.... However, it doesn't appear it will be ready before January.

Edsel B will be virtually identical with small Ford Falcon.... Most parts will be interchangeable.... Basic body will be the same.... Different grille, quarter panels will distinguish it from Falcon.... Engine displacement on "medium-small" Edsel will be around 180 cubic inches.

Six-Barrel Carburetors?

REPORTS THAT SIX-BARREL CARBURETORS would be offered by some makers on 1960 models are doubtful. Practically every auto company is playing around with such systems, but they're at least a year away.... Chief reason is high cost.

One company now experimenting with a three two-barrel system.... It may offer it late next year as an option.... Unit is said to give performance equal to that of a supercharger at speeds up to 80 mph.

Buick Hopeful For Improved Sales

BUICK'S NEW GENERAL MANAGER, Edward D. Rollert, is not dismayed by slump in medium-priced cars.... He predicts that this price class will grow in proportion to growth in total car sales.

At his first press conference in Detroit recently, Rollert expressed high optimism for his division, despite its steady decline in the market place.... Buick today holds seventh place in car sales compared with third place only three years ago.

Rollert emphasized that his main aim is solid growth of the division rather than a particular sales position.... He forecast that Buick sales this year would be 10 to 15 per cent higher than last year.... Buick sales for first four months totalled 89,800 compared with 97,600 in the like 1958 period.

More Self-Adjusting Brakes

EDSEL AND MERCURY have been the only makes equipped with self-adjusting brakes.... American Motors has offered the brakes on its cars since 1958, but as a \$10 extra-cost option.... At least one high-price car will make the brakes available as a standard item on its 1960 line.

What Does It Take to Stay In Business?

ACCORDING TO ONE AUTHORITY, if you're not showing at least a 6 per cent increase in sales every year, you may be loosing ground.... That gain should be made without additional floor space, he points out.

The authority figures it this way: population is growing at a rate of about 1.5 per cent a year; prices are inflating at about 2 per cent annually; a trading of better products, higher priced products, and more convenience items add another 2 per cent to sales.

Incidentally, how's your net profit per new car sold? Metropolitan Chicago Ford Dealers Assn. says its dealers averaged \$86 per new vehicle sold during May on an average sales increase of 7.3 per cent from April to May.



Auto Companies Interested In Safety

AUTO COMPANIES' CONTINUOUS INTEREST in safety again is pointed up in new grants made to 12 organizations.... Latest total, amounting to more than \$1.7 million was announced by Automobile Manufacturers Assn.

Leading recipients are the Automotive Safety Foundation, which supports a host of safety programs throughout the country, and Cornell University's automotive crash injury research program.

Hertz Corp. Ordering Compact Cars

ONE OF THE FIRST BIG CUSTOMERS for Detroit's small cars will be Hertz Corp., one of the leading car rental agencies.... Company plans to order 4500 of the compact cars as soon as they go on sale this October.... Initial order will include 1500 Chevrolet Corvairs, Ford Falcons, and Plymouth Valiants.

Public Opinion Makes Itself Felt

IF YOU DON'T THINK THE PUBLIC has considerable influence on automobile styling, wait until you see one of the 1960 models.... Last year a long-familiar trademark was eliminated from a particular make when company completely restyled its line.... The barrage of complaints from owners during past year has prompted car division to restore the well-known identification device. Do you know the Car?

Chevrolet Cites Advantages Of Rear-Engine Car

CHEVROLET MIFFED AT CHRYSLER'S and Ford's advertising bombardment against rear-engine cars called a special press conference in Detroit.... It stated that rear engines should have been here many years ago.... Advantages of powerplants mounted in a spot where others feel a luggage compartment belongs were outlined.

Division invited Maurice Olley, former director of Chevrolet research and development, to discuss ticklish subject without actually revealing Chevrolet's plans.... Although Olley selected a "hypothetical" rear-engine car for discussion purposes, there was not much doubt that he was describing 1960 Chevrolet Corvair.

The car, he said, would be powered by an air-cooled aluminum flat six engine; use coil springs; swing axles at rear; have 13-inch wheels; and have a unitized body.... Advantages of rear-engine job, according to Olley: Permits lower roof line; eliminates transmission hump inside of car; eliminates considerable road and engine noise; gives better traction and brake life; and provides easier servicing.

Facts on Auto Scrappage

AUTOMOBILE SCRAPPAGE LAST YEAR was second highest on record.... During 1958 more than 3.8 million passenger cars hit the junk heap, despite the economic recession.... That compares with a peak of more than 4.3 million junked in 1956.

In addition, there were some 575,000 commercial vehicles scrapped last year compared with 562,000 during 1957.... While the 1958 total appears high for a recession year, three other years topped that figure.... During 1950 and 1951 and again in 1956 truck scrappage surpassed the 600,000 mark.

New Car Sales Score

AMERICAN MOTORS TOOK 6.6 PER CENT of industry's automobile production for first six months.... Compares with 4.1 per cent for like period last year.... Its only other small-car competitor, Studebaker-Packard, bit 2.7 per cent of production pie, compared with a slim portion of 0.89 per cent last year.

General Motors suffered sharpest decline.... Its share of assemblies for six-month period dropped to 48.4 per cent from 54.5 per cent last year.... Ford was up about 2½ percentage points, from 26 to 28 per cent.... Chrysler, hampered by strikes in early stages of production, slipped from 14 per cent to 13 per cent.



New General Sales Manager For Chevrolet

K. E. STALEY, 30-YEAR CHEVROLET VETERAN, is new general sales manager of that division.... He succeeds W. E. Fish, who retired this month.... Staley joined Chevrolet as a district rep in 1929, has served as executive assistant general sales manager since 1956.

National Auto Show May Go "International"

PRESENT THINKING BY SOME INDUSTRY OFFICIALS indicates that all foreign manufacturers may be invited to participate in the extravaganza—including the Soviet Union.... 1960 Detroit Show is scheduled for Oct. 15-23 in city's new 400,000 sq ft Cobo Hall.

Octane Rating Going Up

OCTANE RATINGS FOR AUTOMOTIVE GAS keep rising.... Newest report from U.S. Bureau of Mines showed trend.... Regular grades had an average octane rating of 90.6.... Premium grades, 98.9.... Super grades 101.8.... Regular and super grades were up 0.4 of a point over averages for summer of 1958.... Premium grades had risen 0.5 of a point.

Selling Bonds Preferable To Higher Gas Tax?

SPECIAL BOND ISSUE TO RAISE FEDERAL HIGHWAY FUNDS is to be weighed seriously on Capitol Hill.... Selling bonds is seen by some congressmen as preferable to a higher federal gas tax.

There is no general agreement, yet, on pushing bond idea.... And finding an acceptable financing method will be a hard job.... A firm plan late in this congressional session is hoped for now.

Booster For Auto Seat Belts

ONE BIG FEDERAL AGENCY IS SOLID on auto seat belt use.... Health, Education, and Welfare Dept. is putting safety belts on its 1,400 vehicles.... Total includes 580 passenger cars.

HEW Secretary Flemming views belts as lifesaving factors when accidents occur.... U.S. Public Health Service, a branch of the HEW Dept., believes all car owners should install seat belts.

Workers Changing Buying Habits

CITY WORKERS HAVE CHANGED their buying habits.... They spend a smaller part of each dollar for food and shelter than they once did, U.S. Labor Dept. finds.

Wage earners, who now have more leisure time, are getting more use of their cars.... Such items as local and long-distance travel, medical care, and recreation account for about 40¢ of each of their dollars.



More Mileage Means More Service

CARS, TRUCKS, BUSES WILL BE DRIVEN close to 700 billion miles in U.S. this year.... That's Bureau of Public Roads forecast.... It puts 1959 figure about 35 billion miles ahead of 1958.

Mileage pickup will produce more demands for service, both in cities and out on rural roads.... Better than 40 per cent of this year's mileage probably will be in city areas, close to service centers.

★ Letters to the Editor ★

Electric Car Data

Dear Sir:

We have just read your article on the Electric Car in the June 1959 issue of MOTOR AGE, and were very interested.

Could you possibly get us information on this car, such as, are dealerships on the car available, the prices on this car, and any additional information which you could obtain.

We would possibly buy a few of these for tests, as we feel we may have a good market for them.

Thank you for your attention to this matter.

John W. Eisenhauer

Editor's Note: Write Stinson Aircraft Tool & Engineering Corp. 7961 Clairemont Mesa Blvd., San Diego, Calif. An electric truck is also being produced by the Cleveland Vehicle Company, 3949 Lakeside Ave., Cleveland 14, Ohio.

Excise Tax Blocked

Gentlemen:

Undoubtedly every one of your readers will be glad to know that the Industry-Wide Excise Tax Committee has finally been successful in securing the complete revocation of Revenue Ruling 58-620. (Excise Tax on rebuilt parts.)

This Committee feels very proud and happy in being able to make this announcement since it is the result of a great deal of continuous effort dating back to November 8, 1958.

As you know, originally this Ruling was to go into effect on February 1, 1959, and the Committee was successful in secur-

ing two postponements, one to April 1st and the second to July 1st. These postponements were in themselves substantial accomplishments since the time gained through these postponements made it possible for the Committee to do considerable work in presenting every possible argument against Revenue Ruling 58-620.

Our attorneys, Messrs. Halfpenny and Hahn, submitted masterful briefs in opposition to this Revenue Ruling and a considerable amount of testimony was given by many people in our industry, both wholesalers as well as rebuilders, in an effort to explain to the Commissioner and other officials of the Internal Revenue Service the injurious effects that this Ruling would have on our industry. As a result of the revocation of this Ruling the excise tax liability on repaired, rebuilt and reconditioned automotive parts remain the same as it was in the past and eliminates from the possible tax liability practically any and every rebuilt job that might have been done by any rebuilder or in any wholesaler's machine shop. The Committee is proud of its success in securing this revocation since this will continue to save our industry many thousands of dollars in excise tax annually.

Ira Saks, Chairman Industry-Wide Tax Committee

Extends Thanks

Dear Editor:

I wish to thank you for your appearance on our national pro-

gram. We do thank you and your Motor Age Magazine for all the fine publicity that IGO-A has received during the past year. I know with your continued help that IGO-A will grow in the coming year.

Again, many personal thanks.

Ray J. Campbell, Immediate Past President Independent Garage Owners of America, Inc., 1000 E. 11th Ave., P. O. Box 3092, East Colfax Station, Denver 18, Colo.

How about Steam Car?

Dear Editor:

Projects and rumors involve electric individual wheel motors, aluminum engines, electric battery powered cars, and turbine jobs. Is there no hope for the steam cars?

The Stanley and the White admittedly presented problems. But the Doble left little to be desired. Back in the 30's I watched one fire up its flash boiler in the same couple of minutes any careful driver would use to start a cold engine. It used the same few quarts of water for steam in its sealed condensing system over and over.

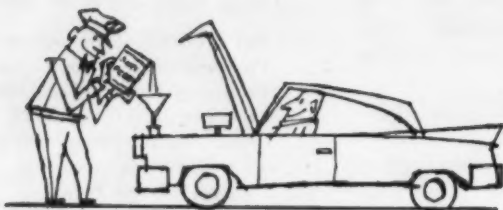
From a standing start at the bottom of the longest, straightest, steepest street in Berkeley it accelerated noiselessly all the way to the top with no gear changes. The power plant was so simple that even I could understand it, and the number of moving parts was ridiculously small by comparison with today's maze.

F. Pierce Sherry, c/o Duffy Bros. Garage, 1301 Third St., San Rafael, Calif.

ARRESTING the

Anti-freeze

Nationally known brand



Sell it and install it and charge for the installation.

THERE is a mighty effort being made to bring the anti-freeze business back to you. Chaotic marketing condition can be controlled through new pricing policies, set by major anti-freeze manufacturers. This means business for you in more ways than one.

Here's what happened to the anti-freeze market. In 1948, five per cent of all anti-freeze sold "over the counter" by non-servicing retailer sold and installed 95 per cent.

Then, everybody got into the act. The discount house, the grocery super-market and chain store, the farm auction, drug stores, department stores and the retail auto chain stores—they all got into the act of catering to the do-it-yourselfer.

By 1956, a shocking 25 per cent of the anti-freeze business had gone elsewhere, than the regular channels of automotive distribution—the wholesaler and the service retailer. If that wasn't bad enough, by 1957 your loss was up to 38 per cent. It got worse in 1958, when 45 per cent was diverted from regular automotive channels.

Bear in mind that in the period of 1948-1958 when anti-freeze sales loss went from 5 per cent to 45 per cent, motor vehicle regis-



Sell additional needed services to prepare customers' cars for winter.

tration jumped 27 million! You had more prospects, and got 55 per cent less business. Vehicle registrations in 1948— 40,502,000. In 1958, 67,760,000!

The Appeal Was Price

Price and price alone was the factor. While the nationally known and nationally advertised brands Fair Traded their anti-freeze at \$3.25 a gallon, the cut-throats were peddling off-brands at \$1.98 or \$2.09 or \$2.29 a gallon.

Now, you and I know that there's more to getting a car ready for winter than pouring in anti-freeze. So the loss of 45 per cent of the anti-freeze market affected you three ways. You were out of competition for "cash and carry" sales. For the most part you lost 45 per cent of anti-freeze installation. And finally, and perhaps most seriously was the loss of mechanical service sales attendant to preparing a car for winter driving.



market thief

makers plan bigger share of anti-freeze sales for you

By Frank P. Tighe, Editor



Sell competitively to the cash and carry customers.

This included such needed services as radiator reverse flushing, cooling system inhibitors, radiator sealants, radiator hoses and clamps, radiator caps and pressure caps, thermostats, radiator cores, fan belts, heater hoses, heater hoses and water pump replacements.

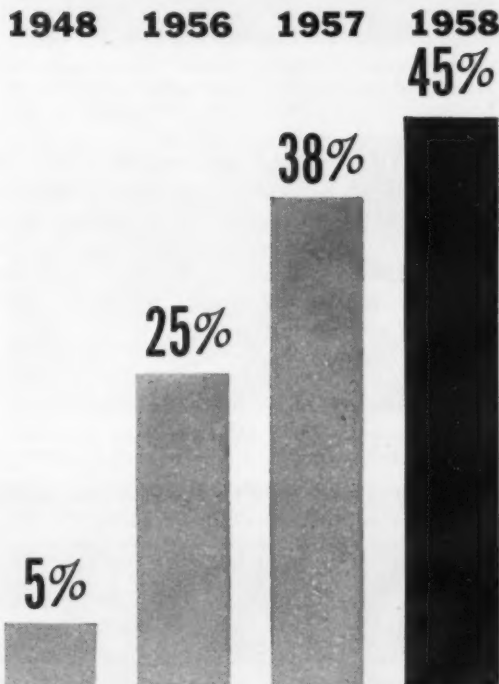
This is what you as an automotive expert should point out to your anti-freeze customer . . . to provide for the safe and sure performance of his car's cooling system needs this winter.

The Price is Right

This fall and winter, you will be back in competition with off-brands discounted anti-freeze. Nationally known brands of permanent type anti-freeze will sell for \$2.39 per gallon! Plus installation! Entirely competitive, and with the backing of reputable man-

(Continued on page 104)

Cash and Carry Sales Increases



Ten years ago only 5 per cent of all buyers purchased anti-freeze at cash and carry outlets. Last year those purchases rose to 45 per cent.



Mechanical Story of the Month

How to cure ENGINE 'heart failure'

An outline of procedures for restoring engine power, economy and performance

BEFORE taking any engine apart, it should be road-tested. This makes it possible to test its performance as it appears to the driver-customer. Also it gives you, the Service Specialist, a chance to listen to the sound of the engine whose zip and economy are in question.

Convinced that the trouble is in worn rings and valves, then you can begin the work of restoring the engine's power, performance, and economy.

Look for the following conditions when taking the engine apart. Correct as needed. . .

After pulling the cylinder head, clean the

Preparing cylinder block for new rings and valves. Ridge was removed from cylinder bores.



Removing the glaze from the cylinder walls. This operation helps rings seat faster.



carbon deposits. Check the surface for warp-age. This can be done by using a straight edge. The cylinder block should be checked also at this time. Even though the block or head may only be slightly warped, it should be corrected. In most cases only the head will have to be milled.

Care in Milling

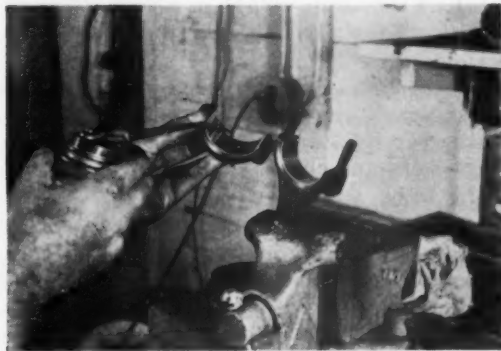
If your shop doesn't have a manual which tells how much to remove from the head, be careful. As a rule of thumb, do not exceed .005 inches on the late model high compressions V-8 engines. If they must be milled, make sure the same amount is removed from the intake manifold surface also. This will insure correct alinement at the intake manifold.

Regardless of the type of engine to be worked on, most cylinders will have a ridge at the top of the ring travel. This ridge is built up to a point, where if not removed, the new rings or piston lands may be broken. This ridge should be removed on every job before removing the pistons. It is good practice to remove this ridge before pushing the pistons out. Special reamers are available for this operation.

Connecting Rod Bearings: If the bearings are free of blemishes and show an even wear pattern, it is a good indication that the crankshaft is in good condition. For safety sake

(Continued on next page)

Before installing pistons apply plenty of oil to the bearings.



Dip piston in oil install ring compressor and tap into cylinder lightly.



Using a special reamer to remove ridge from top of cylinders. Ridge should be removed before taking out the pistons.



Use care when removing and replacing rings on pistons. A ring installer is recommended.

When valves are removed use a wire brush to clean out thoroughly the valve guides.





Mechanic is removing pits from valve seats and grinding them to their proper angles.



After grinding the valve seats, they should be checked with dial gauge for concentricity.

CURING ENGINE 'HEART FAILURE'

..... CONTINUED

the shaft should be "miked" to determine the correct bearing size for replacement. If journal is rough and out-of-round, it should be turned down. Generally if more than one journal is bad the crankshaft should be removed from the engine, and sent to a machine shop for turning.

Pistons and Connecting Rods: The piston lands should be examined for wear and new oversize wrist pins fitted. Rod alinement should be checked with a special rod aliner fixture.

The piston itself can be the key to whether the engine job will last or merely provide the customer with further transportation for a few thousand miles. After cleaning, the pistons should be inspected for minute cracks and scores. Any piston suffering from minute cracks should be discarded. If piston is in good condition, it should be checked for size. In most cases the skirts will be collapsed. These pistons can be used again by having the skirts expanded.

Piston expansion is done by a number of ways, knurlizing, peening, etc. All require special equipment, with each method being completely satisfactory. If a novice mechanic is helping out and does the ring installing, make sure he doesn't line up the ring gaps in a vertical row. Follow the ring manufacturer's installation instructions. Ring gaps should be spaced as far away from each other as possible to lessen the chance of blow-by. Pistons should be dipped in a good grade of oil before installing them in their respective cylinders.

Check Connecting Rod Bearings . . . Inspect crank pins for damage, out-of-round, and taper. Reassemble cap and rod with bearing shells, and check fit using plastigage, or shim stock.

Servicing Pistons for New Rings . . . Clean ring grooves, and oil return holes. Place a ring down at the bottom of the ring-traveled part of the cylinder bore. Square ring in bore

(Continued on page 72)



Management Story of the Month

The POWER of Advertising

Mr. Cooper (left) talks over his Committee's activities with Motor Age Editor Frank P. Tighe. Mr. Cooper's speech was given earlier this year before the Ohio Association of Broadcasters.



*Timely excerpts from an address by Walter B. Cooper,
Chairman, Advertising Ethics Committee of N.A.D.A.*

THE power of advertising—to do good or evil—has been known to advertising people, manufacturers and dealers alike for years . . . I am equally as sure that retailers, such as I, are inclined to underestimate the power of advertising.

Historians will have a great deal of difficulty in the future finding out whether advertising or the availability of credit was the major factor in the phenomenal growth of the

automotive industry since the early 1920's. The contributions of advertising and credit availability are parallel. One is probably as important as the other.

The automobile manufacturers have also recognized the power of advertising as a sales aid. For years the manufacturers and dealers, as a team, have spent billions of dollars to acquaint the American people with the great possibilities of the (Continued on page 100)



Motor Age's Shop of the Month

SERVICE specialists key to King Motor Co. success

Maintaining good will among King's mechanics and an intensive customer relations program pays off in Volume



MISTER mechanic is a real somebody and not just a cog in a machine at King Motor Company, Ford dealer, Anniston, Ala. That is because he is given a chance to be known. He has a chance to exert his influence and to develop business for the firm of which he is a working partner.

Every man working in the shop has a sign hanging above him giving his name and his years of service as a Ford mechanic. This gives customers a chance to ask for them by name and to greet them by name. It gives the mechanic more pride in his occupation and in the company for which he works.

The King Company, which advertises itself as "the busiest Ford dealer in the South," employs 12 mechanics "on the line." It also has four paint and body men, one front end

Above left: View of King Motor Co., Anniston, Ala.

Left: View showing mechanics servicing the cars. Another row of cars are behind columns on left.



King Motor Co. uses latest equipment. Specialist is shown using this equipment in tuning-up engine.

man, and three service salesmen including the service manager, Norman Stovall. The service line is actually double. Cars face one way in one line and the opposite in the other line. The service benches and machines are in between. Except for their own tools, mechanics can more freely interchange machines and equipment.

The spirit of being a part of the organization runs through all the mechanics. It is due to several reasons. They earn as the company earns under a commission arrangement whereby they get 50 per cent of the labor costs. This applies not only to customer cars but to company used cars which are also repaired in the same shop.

As the mechanics get half of the labor cost they not only do a selling job on customers in the shop with whom they come in contact, but also on their friends and neighbors on the outside. When outside contacts come in, they are requested to ask for the mechanic by name. His "shingle" above his niche in the shop makes this easier. Mechan-

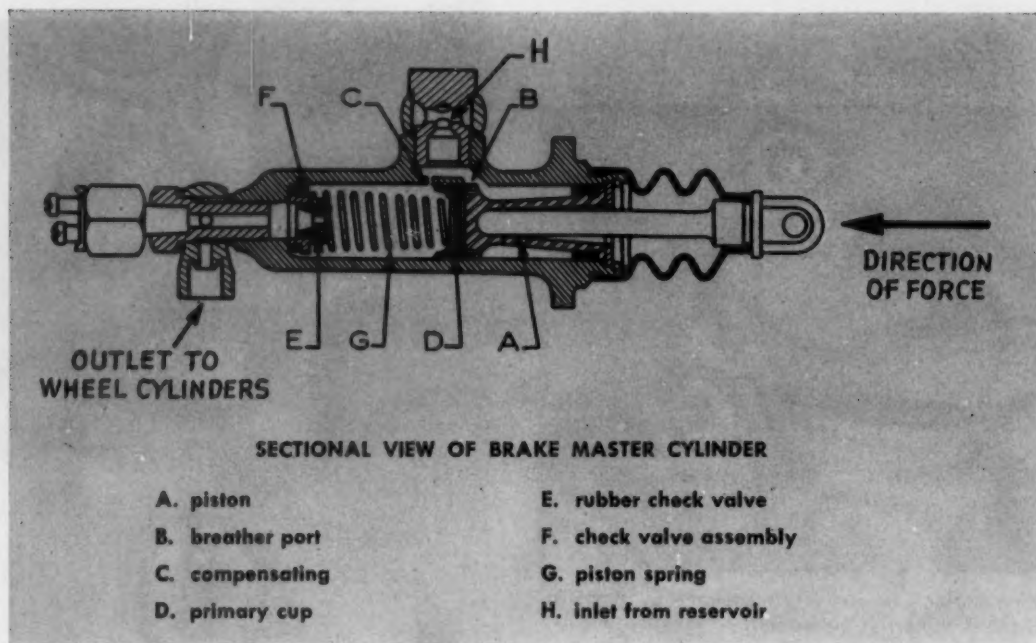


Norman Stovall, service manager, has signs designating the service manager and service salesmen.

ics are also furnished with cards. The card reads: "It's been my pleasure to service your car. I trust you are entirely satisfied with the work." These are handed to customers as they come for their car or else left in the car. Needless to say the mechanic who thus leaves his "calling card" is a little more careful to see that the job is done right.

Service manager Stovall reports that a meeting of the service crew is held every first Tuesday of the month. A film is shown, service technique is discussed, and each mechanic is allowed to "get anything off his chest." Helpful suggestions often come from the men themselves. In addition extra meetings are called, if necessary, to step up operations, to meet quota or when some special situation develops.

Mr. Stovall is a "father confessor" to his
(Continued on page 68)



Brake service on the SIMCA

By Terence J. McCabe, Service Editor

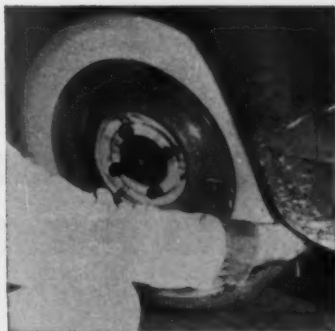
Simple, accurate and trouble-free brake service on

LIKE a French movie star is easy on the eyes, so the "Simca" imported from Paris by Chrysler is easy to service. The new import has incorporated many of the Chrysler Corporation styles, and flavors as far as service is concerned. The basic style of course is French, along with the nuts, bolts and sizes of the various components. This car of the Chrysler family will be a big seller this year and many of these sleek French beauties will be seen on the highways and turnpikes of our land.

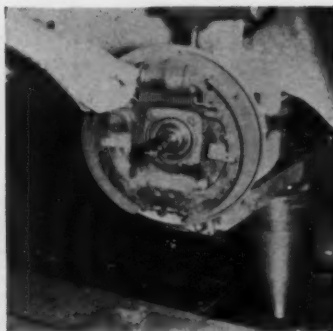
In fact, today most service shops and service stations have been seeing them for a few years now. Such names as Ariane, Vedette, Grand Large, Elysee and Chatelaine station wagon have been seen by practically every service station operator. In examining the Simca automobile a unique method of brake adjustment was observed. Brake service, of course, is just like any conventional domestic car. They use a four wheel hydraulic type brake with self-centering primary and secondary shoes. Each wheel has a single hy-



Extract cotter pin, remove the castellated nut.



Replace dust cap to protect bearings, remove wheel.



Peel back dust cover to check for leakage past piston seals.



Fluid reservoir on firewall, next to ignition coil and fuse box.



Brake pedal depressor in position, brakes fully applied.



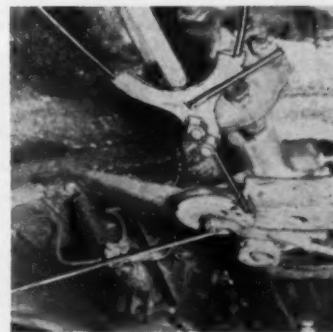
Wrench in position to slack off adjustment. Note cardboard.

a French import is described

draulic cylinder, coupled to a conventional master cylinder.

The master cylinder receives replacement fluid from a remote glass reservoir, located on the engine fire wall. The line sketch will show the simplicity of this easily serviced unit. Parts for all requirements of course can be obtained from your local Simca dealer, or through your local Jobber, who handles imported car replacement parts. The master cylinder is located under the floor, forward of the transmission cross member.

(Continued on page 64)



Hand brake cable slack-adjuster (below front "U" joint).

IGOA's / A TRIBUTE TO PROGRESS

Fourth convention

*A fine turn-out, solid business sessions
mark best-yet national convention in Denver*

WITH greetings from President Eisenhower and from Colorado's governor Steve McNichols, the fourth annual Independent Garage Owners of America welcomed delegates from 28 states.

IGOA's executive committee were in busy sessions for two days prior to the convention itself. Highlights of the meetings are shown

in pictures that are shown on these pages.

Fred Bethel and Henry Ledbetter of Dallas, asked for aid in organizing Texas under the IGO banner. Delaware Valley Auto Body Assn. of Philadelphia joined IGOA as a unit-member-at-large. Convention cheered news at the proposed 8 percent Rebuilders Tax had been withdrawn.

MOTOR AGE editor Frank Tighe addresses convention on Repair Shop Management.





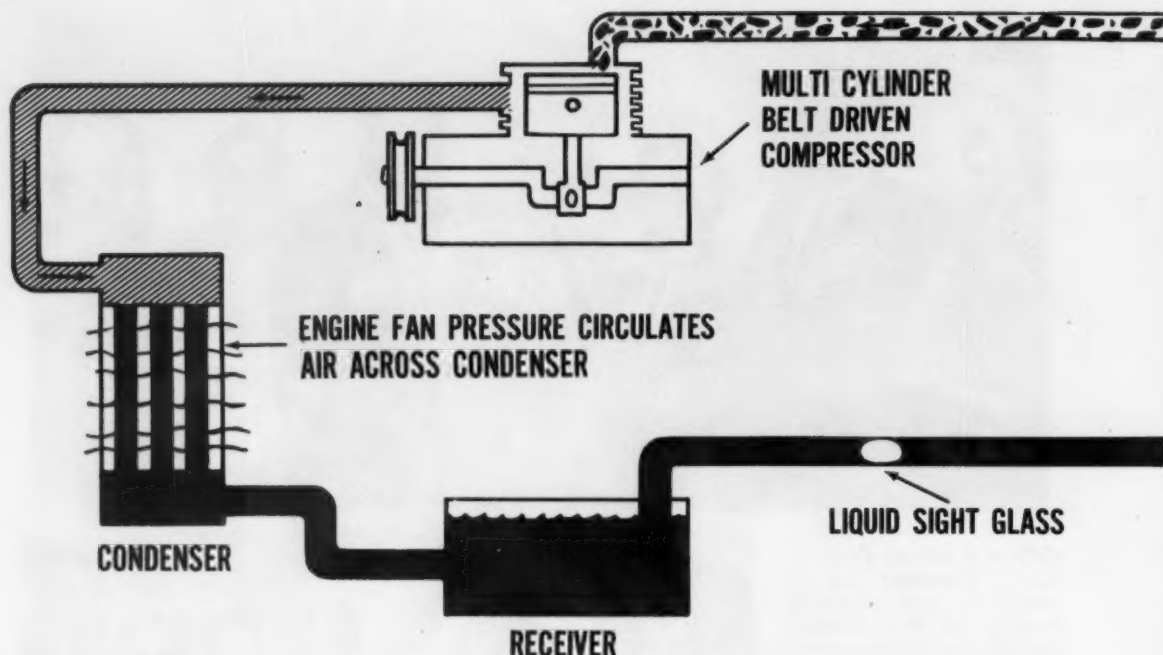
IGO of A officers (l. to r.) Ray J. Campbell, Denver, immediate past president; George Millikin, Youngstown, O., 2nd vice-president; H. F. "Red" Reagin, Atlanta, Ga., president; Art Kitell, Pittsburg, Kan., 1st vice-president; George Millinger, St. Louis, Mo., secty.-treas. (reelected); Ralph James, Tulsa, Okla., executive director; Wilbur Wilder, Nashville, Tenn., 3rd vice president.



Annual Banquet Highlight (l. to r.) Mr. and Mrs. David A. Taylor; Mrs. and Mrs. Drexel D. Minshall (Messrs. Minshall and Taylor-The Gates Rubber Co.); Mrs. Henry Sorenson; Mrs. and Mr. Jack L. Wiggins (A.S.I.A. executive secretary, wholesalers' division); Henry Sorenson, Cal. delegate.



Miss Sorenson is welcoming IGO of A delegates as Denver's Ray Campbell looks on.



BASIC COMPONENTS IN A CAR AIR CONDITIONING SYSTEM
SHOWING CYCLE OF EVENTS RESULTING IN CONDITIONED AIR

EVAPORATOR / the Alaska in a cars' AIR CONDITIONER

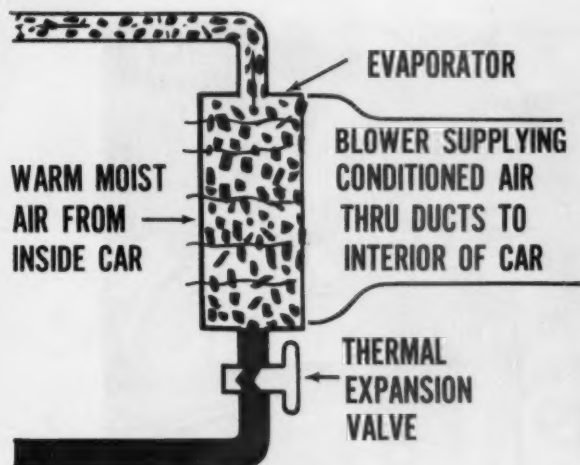
*Often neglected, the evaporator plays an all important role
in the efficient operation of the air condition system*

THE air conditioning system of every car has a very important item known as the evaporator. It is only one of the many components that make up our present day efficient atmospheric control system used in the automobile. The evaporator however, is important. Often it is a neglected component of this system. Generally the evaporator is hidden either by a metal or plastic casing below the dash; or it's located in the trunk below the

package shelf or on the floor of the trunk.

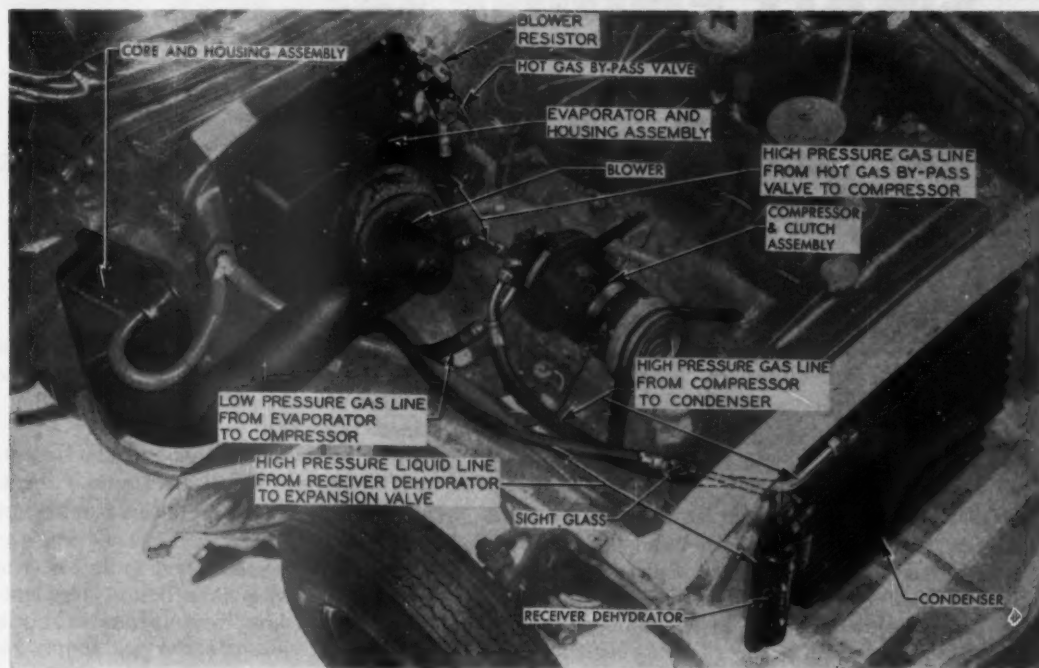
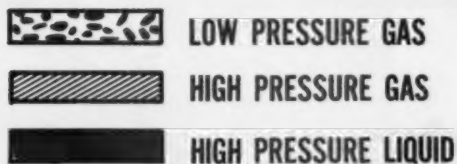
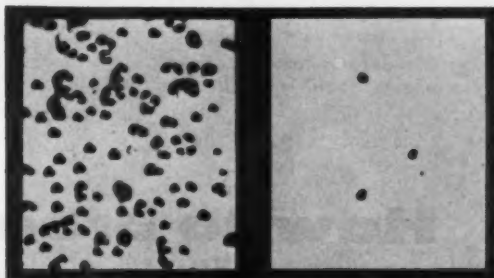
The servicing of this unit is all important towards the efficient operation of the air conditioning system. First off, let's take a look at the evaporator's place in the system. What is its basic reason for being there?

Logically some basic principles of air conditioning must be understood in order to understand the need for the evaporator. The basic idea of any air (Continued on page 96)



Above, engineers checking pollen removed from surface of test evaporator for an efficiency check.

Below is a sample of test slides magnified to show pollen collection. Left- dry evaporator. Right- wet.





Auto service shops, such as one above can pick up additional profit by servicing small engines.



Standard automotive tools, a few special small engine tools will fill your department's needs.

How to break into SMALL ENGINE service

Millions of small engines are being sold and operated

THE degree of rain and snow each year contributes directly to the amount of grass that grows in a season. Obviously, this controls the frequency to which small engine equipment is put to use. These are important factors upon which makers of the small internal combustion engines forecast their future production and sales efforts.

After the accumulation of much data, sifting, analyzing, and evaluating this information, a decision is made by top management of the engine manufacturers. The result is, that

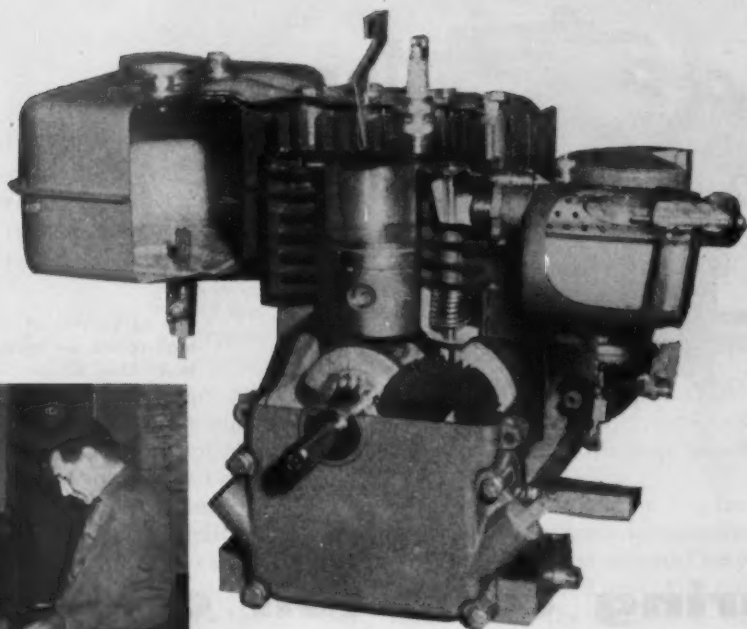
one manufacturer of small internal combustion engines, will produce better than one million of these light-weight, versatile, power plants this year.

It is predicted, that the production of these small engines overall, throughout the nation, would reach many millions of engines in the next few years.

The sale of these power units today is very widespread. They are being sold and merchandised in lawn and garden supply stores, lawnmower sales and service shops, gasoline



Pictured above is a four-stroke cycle engine.
At left: Mechanic servicing a chain saw unit.



In this automotive shop father and daughter both work on small engines to earn extra \$\$.

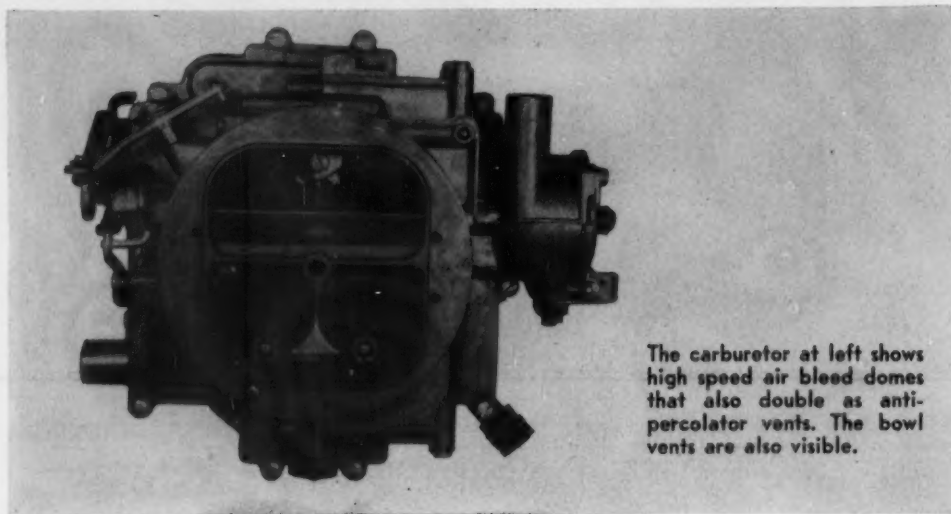


throughout America today

and service stations, auto accessory chain stores, large and small department stores and by drugstore chain operations. Consequently, all of these sales outlets are pouring millions of pieces of portable engine-powered equipment into the hands of the American public.

It can be readily seen that with this type of sales market penetration, an extremely large and profitable service business would result. Considering that the average life of rotary type lawnmowers is only five years, imagine

(Continued on page 88)



The carburetor at left shows high speed air bleed domes that also double as anti-percolator vents. The bowl vents are also visible.

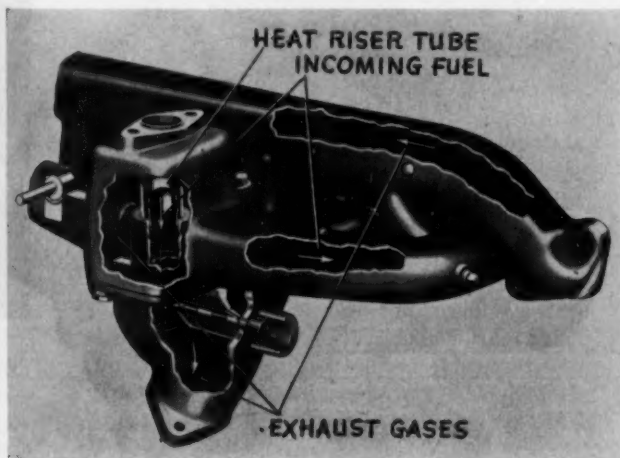
Curing common complaints on FUEL SYSTEMS

Hot weather is hard on fuel systems. Watch out for vapor

Schematic drawing shows how bowl vapor vent is opened at idle by arm on pump lever shaft.



Manifold heat risers are in exhaust system. Their operation is essential to fuel system.



SUMMER time means open road time. Unfortunately many cars will be stuck out on the open road. Cause will likely be an overheated engine or fuel system breakdown.

All your tune-up customers are vitally interested in NOT having the kind of breakdown referred to above. They depend on your experience to prevent this. You can help cut down on the rough condition of the gasoline that's supplied to the parched throat of the carburetor, by preventing vapor lock and percolation. You must also prevent flooding.

Just what is "Vapor Lock?" This condition is the result of the gasoline boiling or vaporizing in the line. This usually occurs in the fuel pump or in the suction line between the tank and the pump. Cars that are prone to vapor lock at the fuel pump usually have a heat deflector plate above the fuel pump.

This plate deflects the exhaust manifold heat away from the pump.

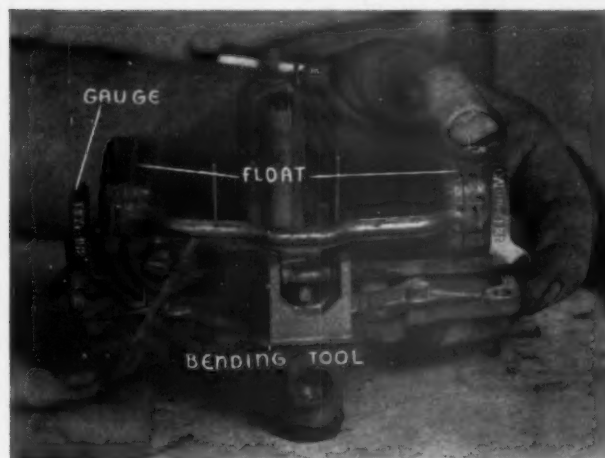
Some manufacturers have louvers or ducts in the inner fender well that direct a stream of air over the fuel pump area. If the deflector is missing due to someone neglecting to re-install it, Vapor Lock is sure to result. In the case of louvers or ducts, body undercoating can clog the slits and stop or restrict the flow of cooling air. Bent duct work or closed vents will also cause air stoppage resulting in vapor lock.

Check the run of the suction line from the tank to the pump. On some installations, the line parallels the exhaust system; may come too close to muffler or tail pipe. Any excessive heat radiated from the exhaust to the fuel line will cause the fuel to boil in the line. When pressure is reduced, the boiling point is reduced; when pressure is raised, the boiling point is raised. When the gasoline in the line to the pump, for example, is subjected to the suction or low pressure, very little heat would be required to cause boiling. There are two methods used to offset this type of condition in hot climates. One is the use of a pressure-type gas tank cap. This uses the

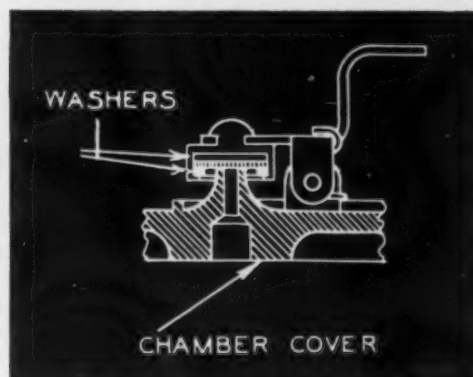
(Continued on page 74)

lock, percolation and flooding!!

On twin floats lateral and vertical adjustment helps maintain fuel level stability.



Anti-percolator valve requires adjustment for relief of vapor pressure at idle only.



BODY SHOP TIPS



Damp Rag Prepares Metal For Tinning

When tinning metal for lead-
ing I find I can do a better job by
doing the following. Instead of
using a dry rag to wipe the
metal, I use a damp rag. I soak
the rag in water and wring as
dry as possible. Solder or tinning
compound will not stick to a
damp rag as it does on a dry one.
This leaves more solder or tin-
ning compound on the metal and
gives a cleaner and better job.
*Aubrey H. Whitesell, M. W.
Whitesell's Service, Waynesboro,
Va.*

Hammer Dipped in Thinner Smooths Compounds

When straightening car door
panels it is sometimes necessary
to punch holes in the bottoms of
doors for picks and pries. After
straightening is complete I fill
these holes with auto caulking
compound. Then I dip the end of
my hammer in lacquer thinner
and tap to smooth the compound.
*Raymond Lindquist, Rt. 1, High-
way 71 on Eagle Lake, Willmar,
Minn.*

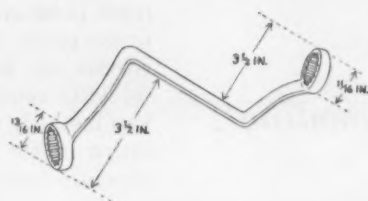
Eliminating Kinks In Wiper Hoses

I have found a way to stop the
kinking of the hose on wind-
shield washers on all Chrysler
cars, and others mounted in the
same way. This kinking occurs

between the pump and check
valve. By cutting the rubber
hose, and inserting a piece of
 $\frac{3}{16}$ " copper tubing, to replace
the kinked curve, the trouble is
eliminated for good. *John J.
Knott, 484 Glenwood Ave., St.
Paul 17, Minn.*

Tool for Removing Radiator Harness

On the 1959 Chevrolets it is
a tough job getting at the bolts



around the radiator that hold
the wire harness. I took an ordi-
nary box wrench and bent it
as shown in illustration. This
enables you to reach the ones
that are hidden. *Joseph Gulley,
East Moline, Illinois.*

Paint-Filled Ball Point Pen Used To Touch-Up

Chipped paint and scratches
are always a problem to touch-
up on new or late model cars.
We have found a method that
does a very neat and fast job.
We take a discarded ball point
pen and fill it with the desired
color paint. The paint is thinned

down to suit your need. Paint
will come out around outside of
ball point. Pen can be worked
back and forth when more paint
is desired. *James D. Martin,
Service Manager, Jack Hughes
Motors, San Marcos, Texas.*

Simplifying Cutting Of Steel Cable

When cutting a length of cable
to replace worn ones I just cut
it with my electric welder. Since
I cut the cable with a mild steel
rod, it welds the wires together
so there are no loose ends. This
makes the job of threading the
cable into position simple. The
cable ends will never unravel.
This method simplifies the cut-
ting of any steel cable. *B. R.
Hinton, Cody Nebraska.*

Removing Plastic Filler From Files

To clean plastic type filler
from your body files; take a bar
of body lead, about 10 or 12
inches long. Slap it against the
file on the flat side, and just leave
the file on the holder. In so doing,
it will not hurt the teeth in the
file, because it is lead. *H. E.
Trachsel, 425-28 St., Bettendorf,
Iowa.*

BODY SHOP TIPS are worth

\$7.50

If you've developed an Idea that
has helped you to do body and
fender work or painting better
or faster, it may be worth
money. Jot down the idea and,
if necessary, make a rough
sketch. Sometimes a snapshot
will help. Just make the descrip-
tion of your BODY SHOP TIP
clear, and if it is used, you'll
receive a check for \$7.50.



Car dealer encloses corner of body shop for low-cost booth

How to build a PAINT BOOTH

IF you've a way with hammer and nails, and some spare time, this do-it-yourself type paint room can be built for several hundred dollars. These photos below show details of how it was done by an automobile dealer in western Pennsylvania.

An area about 18 x 30' in the corner of the body shop was chosen for the paint room. The door for the painter, after the two swinging front doors are closed, is at the room's rear. Entrance of dust will be thus kept at a minimum.

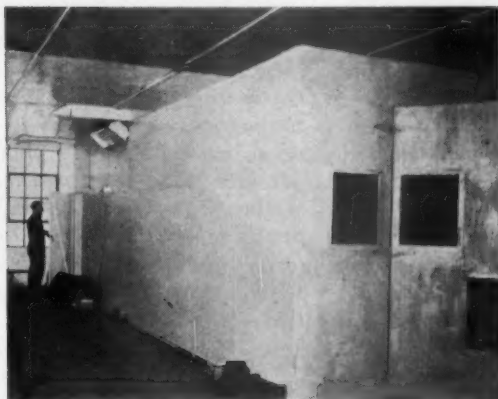
Note the ordinary air filters for domestic furnaces in the front end of the room (at

right in Fig. 1). These filter units can be of several sizes, depending upon individual needs. The trick to them is that they are framed and mounted with wing-nuts on one side of the frame. Thus are easily removed when dirty for cleaning or replacement with new filters.

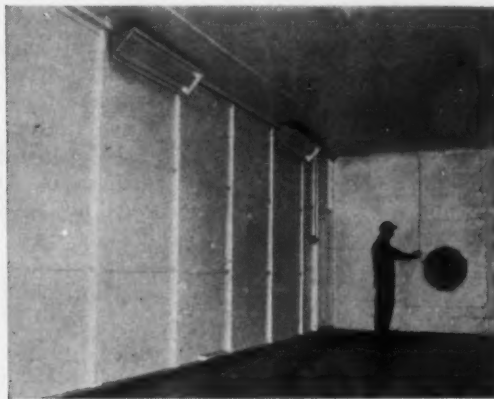
About the walls: Choosing a corner of the building eliminates construction of an end and of one wall. This dealer got a "special price" on 1/4-inch plywood panels for erecting his other side and end with the double swinging doors.

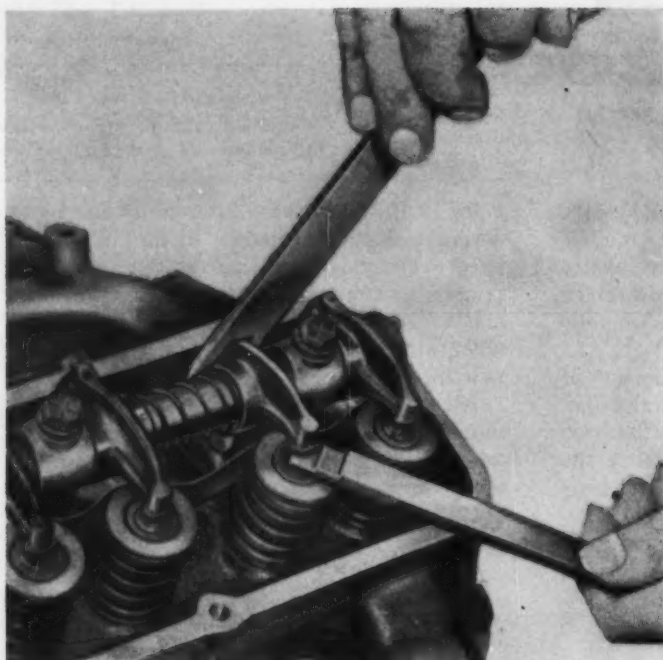
(Continued on page 88)

An area about 18 x 30 ft. was chosen for paint room. Painter enters by rear door.



Note exhaust fan mounted at room's rear. Duct work outside carries fumes upwards.





Valve Clearance check on '58, '59 Ford hydraulic lifters

Adjusting Ford V-8's With Hydraulic Lifters

I have a 1958 Ford V8, with interceptor engine, which has hydraulic valves. I would like some data on adjusting these valves. Can you supply me any information?

George E. Taylor
Schuylle Lake, N.Y.

VALVE stem to valve rocker arm clearance should be .078 to .218 inches on the 352

engine; or .126 to .226 inches on the 230 engine, with the hydraulic lifter completely collapsed. If clearances are below these limits, grind valve stem ends, or install .060 inch shorter push rods. These shorter push rods are available from local dealers. The following sequence is recommended for checking clearances. Rotate the crankshaft until No. 1 piston is on T.D.C. at the end of the compression stroke. With No. 1 pis-

ton on T.D.C., check the following valves: No. 1, 3, 7, and 8 intake—No. 1, 4, 5 and 8 exhaust. Position No. 6 piston on T.D.C., and check the following valves: No. 2, 4, 5 and 6 intake—No. 2, 3, 6 and 7 exhaust.

Cam Angle Dwells Vary On 1957-58 Plymouths

I need some information about cam angle or dwell on '57 and '58 Plymouth V-8 engines. I have a distributor in a '57 Plymouth and in checking it with a cam angle tester dwell will be OK until the vacuum chamber advances. Set dwell at 29 degrees, turn vacuum on and it will read 22 to 23 degrees. Tune-up book reads that through 2500 engine rpm tolerance should be no more than 2 degrees. The engine runs fair but since the stop is controlled by the vacuum chamber should you bend the arm to get equal dwell? Or is the distributor designed to operate on less dwell on light or no engine load? I would appreciate any information on setting the distributor up and anything that would improve gas mileage on '57 and '58 V-8 Plymouths with torque-flite transmission.

Pearlie A. Nash
Nashville, Ga.

for troubleshooting



BY TECHNICAL EDITOR JACK MONTGOMERY

THESE dwells should not vary more than two degrees. I would suggest checking the distributor shaft bushings for wear or bending the arm to equalize the dwell. You might be able to improve the gas mileage by adjusting the transmission bands and adjusting the throttle linkage.

Overheating Problem With 1946 Cadillac

We have an overheating problem with a 1946 Cadillac. As soon as the weather warmed up it began to run hot, about 200 degrees without a thermostat. We cleaned the radiator thoroughly, inside and out. We filled block with muriatic acid and neutralized it with soda. This did not do any good. We removed water pump, and built up the fins on the

impeller. Checked timing and compression. The car runs fine, but will get hot in 8 to 10 miles. It does not throw the water out unless it boils. Can you help us with this car as this is the third one in about 2 years. The other two we did not cure.

*Melvin Link
Keytesville, Missouri*

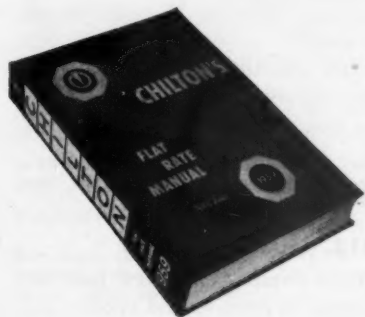
OVERHEATING problems are often tough to lick and the best way to find the cause is by the process of elimination. Loss of coolant and the accumulation of rust and scale are the main causes for overheating. Coolant loss can be caused by external leakage at the radiator, pressure cap, water pump, hose connections, gasket, improper tightening of the cylinder head bolts, or a warped cylinder head, or block gasket surface. The best method for checking internal leakage is to make a pressure test on the system. These testers will uncover leaky head gaskets, and hoses in a jiffy. Other factors worth checking are dragging brakes, slipping automatic transmission or bands adjusted too tight. A careful check of the above items should solve your problem. Also make sure the exhaust system is clear and free from kinks and obstructions.

1952 Olds Hard To Start When Hot

I have a customer who has a 1952 Oldsmobile with approximately 30,000 miles. Compression, points, plugs, timing, starter and carburetor are perfect and the battery is fully charged. The customer has always used high detergent oil, high test gasoline and recently had a motor flush, but it will not start when motor is hot. Any suggestions to overcome this situation would be appreciated.

*R. H. Davidson
Highlands, N.J.*

THIS does happen to a lot of Oldsmobiles and it usually happens after the valve lifters become noisy and the presence of blow-by. If a lot of blow-by is noticeable and the valves are noisy, I would suggest installing new rings and doing a valve job.



new Products

THERE'S PROFIT IN THESE ITEMS FOR YOU

310. Display Stand

Mopar Division of Chrysler Motors Corporation: Recently made available is a new multi-colored, wire base, muffler display stand. Lithographed in three colors, the metal display stand cradles a full size MoPar Sono 4-X Muffler in complete view of the customer. The illustrated merchandiser directs a strong point-of-purchase message by enumerating the main sales features of the product.

For more information, refer to New Product Information Post Card that faces inside back cover.

311. Sta-Ful Battery

The Electric Auto-Lite Company: A new line of sta-ful batteries for passenger cars operating on a 6-volt system is now be-



ing marketed. The sta-ful battery is designed to need water but three times a year in normal car use, states the manufacturer.

For more information, refer to New Product Information Post Card that faces inside back cover.

312. Towing Devices

Weld-Built Body Company: Recently developed is a new type Tow Hitch, Tow Bar, Tow Saddle,



and Tow Cradle. All of these devices are interchangeable. With this combination it is possible to lift all cars and trucks, company states. The outstanding features of the three devices are the elimination of backlash, jerking, chrome scratching, dented grills and hoods. Exact positioning is not required, nor is it necessary for operator to get under vehicle in wet weather.

For more information, refer to New Product Information Post Card that faces inside back cover.

313. Dual Air Sander-Drill



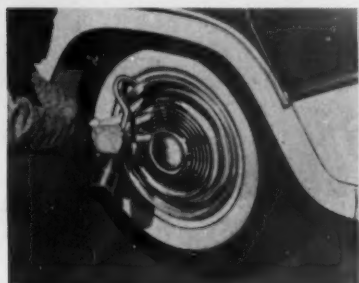
Superior Pneumatic and Mfg., Inc.: A dual purpose, air-operated Sander-Drill has been announced. Operated as a sander, the Dual Purpose uses standard 4" discs or buffers. It does automotive body sanding, sheet metal buffing, deburring and light weld scaling, wood sanding, and rust or paint scaling. Used as a drill, the unit takes any standard drills up to 1/4", is recommended for light sheet metal, galvanized, aluminum sheet or tubing, lucite, transite, asbestos sheet, and other plastics. Directed air exhaust blows away dust and chips as operator works.

For more information, refer to New Product Information Post Card that faces inside back cover.

314. Hub-Cap Tool

Coats Company: A new tool, designed to remove and replace au-

tomobile hub caps without scarring the metal finish has been introduced. Called the Hub-Cap Tool, it is made of alloy steel,

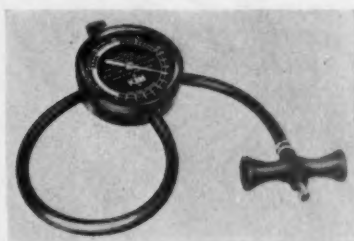


with a forged hook at one end and a soft rubber bumper at the other. The hook is designed to remove the hub cap and the rubber bumper serves to replace it.

For more information, refer to New Product Information Post Card that faces inside back cover.

315. Fuel Pump Tester

Kem Manufacturing Company: A new fuel pump tester which measures the fuel pressures of any model car is announced. The new Kem FPT-6 Tester has a pressure range of 0 to 10 pounds. Another feature is the flexible neoprene "Bowie Connector" which makes it possible to test pump pressure and flow rate on



the car in minutes, the company states. The gauge also combines a full range vacuum section for suction tests together with the pressure test.

For more information, refer to New Product Information Post Card that faces inside back cover.

316. New Packaging Idea

National Carbon Company, Div. of Union Carbide Corp.: A new packaging idea, on concentrated "Preston" Car Wash, with special appeal for the service dealer has just been announced. "Preston" Car Wash will be packaged in "bulk" (12 lbs.) in re-usable 3½-gallon galvanized steel pails. The pails, are attractively styled in three colors. When empty they become handy utility pails for use around service stations and garages. "Preston" Car Wash contains a detergent developed for the quick removal of grime,

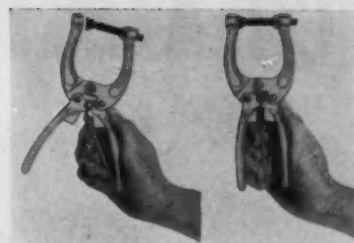


road film, grease and dirt from car finishes.

For more information, refer to New Product Information Post Card that faces inside back cover.

317. Plier-Type Clamp

Detroit Stamping Co.: A portable plier-type clamp, model 462, is available. The De-Sta-Co clamp incorporates two-way trigger release for one-hand operation. Designed for clamping operations in hard-to-reach positions, the clamp provides simple release in operations where space does not permit use of both hands in the



usual manner. This is done by pressing the trigger against either the upper or lower handle.

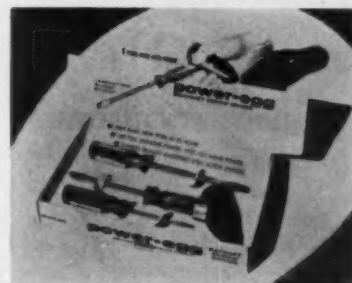
For more information, refer to New Product Information Post Card that faces inside back cover.

318. Curb Sign

Champion Spark Plug Company: Now available is a metal "Mechanic On Duty" curb sign for service stations. It has a rust-resistant baked enamel finish in three colors—black, red and white. The overall height of the sign and stand is 44 inches, overall width, 29 inches. The unit weighs less than 30 pounds and may be removed easily when the mechanic is away.

For more information, refer to New Product Information Post Card that faces inside back cover.

319. Screw Driver



Cuyahoga Products Corp.: A new ratchet screw driver has been developed. Called the

(Continued on page 70)

GREATEST SINGLE IMPROVEMENT

**THE PLUG WASHER
CAN'T STICK...
"BUILT-IN LUBRICATION"**

New "super-slippy" Teflon-equipped
plug is self-swivelling...
Can't stick! Core goes in easily,
comes out easily—leaves
valve wall clean.

NEW!

**PLUS: STANDARD
FULL LENGTH CONSTRUCTION**

Spring-at-bottom — never under
tension until inserted... AND all
the well-known features that have
made the Schrader Valve Core the
Ace of Standardization.



Available in bulk 100 (#4000V) or display packages
(#4000MB). Ask for the standard core "with the
white (Teflon) plug-washer."



IN TIRE VALVE CORE HISTORY

**Schrader #4000 Swivel-T Valve Core
with plug seal of Teflon* assures
most positive air seal you ever made!**

GREAT NEWS! Now you can use a new valve core that improves one of the most frequent and important daily services you handle: valve core removal and replacement. A small fraction of an ounce of Teflon—duPont's miracle material—makes it possible.

HERE'S WHY:

Teflon is the slipperiest sealing gasket substance known—even at high pressures it slides like ice against ice. Tests prove temperature extremes from -100°F to 500°F do not affect this seal of Teflon. It shrugs off oil, water—even acids.

RESULT: Swivel-T Valve Core can't stick in the valves!

RESULT: Makes best seal!

RESULT: Won't break off in valve stem!

RESULT: Unaffected by heat—one core for many vehicles!

RESULT: Tested, approved and used by all tire manufacturers.

RESULT: New cars now equipped with these new cores!

RESULT: M-O-N-E-Y for you—better tire service for your customers!

All this—and no increase in price!

GET STARTED NOW! YOUR SUPPLIER HAS THEM IN STOCK. The new Schrader Swivel-T is ready at your Schrader Supplier. See for yourself . . . first hand . . . that you can make a better valve core seal than you ever made before. Available in the familiar packages of 100 in bulk or in display boxes of five—order today. Cut down on those time-consuming tire and valve repair jobs. Schrader Swivel-T Valve Cores are as modern as today's cars.

*Teflon is a duPont trademark.

Schrader
a division of **SCOVILL**

A. SCHRADER'S SON • BROOKLYN 38, N. Y.
Division of Scovill Manufacturing Co., Inc.

FIRST NAME IN TIRE VALVES

FOR ORIGINAL EQUIPMENT AND REPLACEMENT

1959 New Passenger Car Registrations*

STATE	Buick	Cadillac	Chevrolet	Chrysler	De Soto	Dodge	Edsel	Ford	Imperial	Lincoln	Mercury	Oldsmobile	Plymouth	Pontiac	Rambler	Studebaker	All Others	Total
Alabama.....	May 297	104	1656	75	26	176	55	1909	18	17	145	361	375	389	313	99	626	6621
5 Mos. 1667	605	8652	267	165	614	309	9022	84	105	765	1855	1616	1050	1821	511	2931	32639	
Alaska.....	May 14	8	112	8	4	1	101	3	...	14	17	64	16	43	21	116	548	
5 Mos. 43	43	363	21	16	17	1	362	10	10	46	45	137	60	91	71	340	1960	
Arizona.....	May 109	73	712	23	16	78	42	31	14	26	143	184	210	178	158	3670	16761	
5 Mos. 149	72	3789	96	82	309	143	3073	63	120	446	822	777	1027	782	387	2016	15761	
Arkansas.....	May 102	72	1060	26	23	88	27	966	4	6	90	196	226	230	183	56	203	362
5 Mos. 904	390	5561	140	115	446	176	5511	38	61	568	1279	1636	1212	971	330	1102	19658	
California.....	May 1591	1526	11753	365	282	1012	319	11220	200	272	1167	2207	3056	2827	3829	1201	9650	52497
5 Mos. 8775	7775	55481	1082	1268	4716	1571	55676	948	1527	5928	12001	12906	13206	15649	5689	43959	248143	
Colorado.....	May 184	91	1299	80	29	171	34	1198	18	22	158	246	295	350	356	122	866	5166
5 Mos. 801	455	6532	116	125	650	202	5586	78	116	696	1274	1293	1479	1851	957	2397	24173	
Connecticut.....	May 282	185	1699	108	90	290	15	1516	18	36	165	476	573	537	636	222	1019	8164
5 Mos. 1215	830	7266	488	285	766	184	7689	124	200	817	2047	2914	2248	2634	940	4734	35371	
Delaware.....	May 54	35	425	11	20	56	14	359	3	4	38	92	205	81	61	37	188	1683
5 Mos. 345	174	1971	71	69	216	73	1815	20	35	188	486	781	474	318	149	834	7991	
District of Columbia.....	May 65	77	490	46	25	56	10	500	8	19	45	186	193	190	168	57	307	2424
5 Mos. 273	373	2199	145	91	249	50	2067	36	73	191	558	1174	702	558	258	1372	10466	
Florida.....	May 654	640	3916	153	53	350	113	3638	81	146	374	885	980	927	971	208	4073	18102
5 Mos. 3272	3647	21797	725	377	1402	570	18642	267	365	1920	3687	4094	4474	4552	1274	18719	91257	
Georgia.....	May 624	266	3651	152	69	324	135	3863	28	58	257	771	832	1153	564	290	1617	14674
5 Mos. 1922	899	10073	262	214	817	438	11993	60	173	829	2507	2263	3356	1652	775	4446	43896	
Idaho.....	May 96	55	456	20	14	99	11	487	5	8	69	129	114	170	175	63	148	2076
5 Mos. 515	248	1954	85	73	238	73	1999	33	45	289	531	468	696	717	256	751	8973	
Illinois.....	May 1966	1054	10983	457	298	921	264	9381	110	239	923	2950	2585	3203	2478	945	1776	40121
5 Mos. 9170	5171	48056	1991	1286	3611	1692	42148	879	1253	4751	13517	10318	13745	8773	4536	8304	178721	
Indiana.....	May 361	283	2318	235	294	862	3119	87	83	1652	1538	1652	1236	1034	564	1544	21337	
5 Mos. 3756	1620	16471	665	674	1676	738	18625	299	331	1794	5577	4245	4911	3690	3586	3440	70200	
Iowa.....	May 361	143	2539	117	71	276	81	2379	13	27	260	516	625	540	656	194	354	8136
5 Mos. 1794	688	10785	443	286	1048	332	10670	82	131	1240	2625	2429	2651	2374	1029	1505	40312	
Kansas.....	May 493	164	2775	117	63	287	101	2472	23	28	244	616	710	619	553	221	555	10031
5 Mos. 1651	579	9288	291	180	630	255	7970	78	112	804	2033	1921	2056	1687	607	2104	32446	
Kentucky.....	May 294	129	1847	75	53	175	57	1834	11	14	164	568	504	479	318	125	480	7146
5 Mos. 1295	445	7001	204	157	616	333	7940	48	71	889	1698	1633	1722	1170	801	1626	2667	
Louisiana.....	May 286	138	2273	64	36	132	88	1991	23	30	136	458	332	472	556	110	694	7382
5 Mos. 1594	713	10725	230	175	572	272	9749	79	158	714	2347	1451	2438	1147	574	3143	36061	
Maine.....	May 96	37	670	21	16	90	40	631	8	10	79	132	274	160	251	75	388	2946
5 Mos. 393	188	2623	98	61	317	133	2566	23	49	300	513	830	647	905	360	1475	11481	
Maryland.....	May 294	173	2474	137	97	299	38	2305	21	32	178	520	960	542	666	228	1012	9976
5 Mos. 1415	536	11166	493	366	1253	227	10235	106	163	908	2280	3716	2282	2440	946	4359	43191	
Massachusetts.....	May 534	322	3244	231	158	463	448	3448	43	78	342	1225	1658	825	1309	584	1544	26677
5 Mos. 2280	1247	11773	725	880	1446	383	12336	161	265	1355	3687	2464	2963	1632	1075	5264	54519	
Michigan.....	May 2375	907	11505	401	435	1183	518	12078	97	206	1515	3170	3147	3936	2393	606	2296	46786
5 Mos. 9696	4292	41796	1410	1412	3717	2226	44299	411	1029	5699	11420	9984	13268	8485	2499	8442	170178	
Minnesota.....	May 729	243	2935	143	90	384	116	3287	41	43	322	895	1063	847	896	393	624	13083
5 Mos. 2700	967	12613	547	422	1276	506	13867	112	205	1414	3806	3343	3350	3397	1229	2409	51963	
Mississippi.....	May 167	53	1018	39	19	76	16	648	12	11	56	167	243	167	147	49	336	3446
5 Mos. 630	273	4659	154	67	280	107	4213	28	56	363	1021	832	1066	810	260	113	1037	12623
Missouri.....	May 2878	1219	18408	446	362	1621	442	15707	107	232	1214	3777	3899	3515	3188	1278	4820	63101
5 Mos. 160	73	666	38	19	90	29	640	9	9	86	177	213	168	193	77	187	2863	
Montana.....	May 637	262	2346	105	64	300	118	2336	48	40	347	683	590	631	655	289	592	10043
5 Mos. 125	97	1263	59	29	145	25	1217	7	14	120	243	299	236	226	83	238	4415	
Nebraska.....	May 966	476	6337	253	130	561	160	6502	80	60	638	1325	1352	1360	1173	489	1136	23638
5 Mos. 30	36	156	2	3	12	6	165	5	12	33	60	34	50	43	20	189	556	
Nevada.....	May 145	168	731	36	30	76	9	3618	25	31	135	227	190	243	176	98	886	3667
5 Mos. 97	56	915	32	20	117	38	775	3	16	111	189	349	171	329	132	373	3722	
New Hampshire.....	May 240	152	1963	69	44	235	87	1732	16	37	242	405	634	408	723	269	931	8207
5 Mos. 753	682	4987	466	217	609	108	4914	110	100	520	1374	1840	1709	1433	517	2288	22635	
New Jersey.....	May 3714	3289	20956	1716	1041	2401	579	19577	489	680	2348	6074	7492	6862	5542	2289	10628	95077
5 Mos. 89	39	695	27	12	72	24	544	13	10	54	116	154	157	122	49	185	2362	
New Mexico.....	May 523	213	2963	103	55	285	95	2479	38	44	288	629	547	683	464	262	1001	10672
5 Mos. 1782	1315	10686	416	433	1340	503	10103	201	295	1414	3818	4414	3613	3223	1171	2315	11192	
New York.....	May 5871	7230	45272	3165	2650	8268	1250	41055	966	1366	5151	17158	16051	15419	12257	5099	20816	208493
5 Mos. 427	195	2260	119	72	279	66	2779	21	21	204	861	636	605	403	197	1046	9890	
North Carolina.....	May 2286	936	10622	423	319	1012	390	13683	72	140	1059	2741	3032	3083	1691	843	4728	47056
5 Mos. 71	26	505	33	21	75	19	853	4	8	64	125	190	80	130	37	64	2007	
North Dakota.....	May 444	137	2273	137	93	286	138	2683	30	39	305	667	731	468	543	131	266	3425
5 Mos. 1692	701	5456	394	330	1138	327	9137	61	127	1004	2352	2573	2644	2106	858	2827	96724	
Ohio.....	May 8273	989	37529	1614	1420	4000	1968	40689	363	634	4571	11133	10142	11807	6730	4285	11122	166780
5 Mos. 265	145	1955	44	41	139	37	1722	15	24	165	424	395	496	369	97	504	6850	
Oklahoma.....	May 1333	906	8347	187	175	508	144	7440	56	99	680	1896	1337	1909	1214	516	1648	28295
5 Mos. Data not available at time of going to press.																		
Oregon.....	May 1144	699	6840	531	350	955	185	6071	111	121	739	1632	2517	1810	2042	724	2254	26725
5 Mos. 6396	3969	34062	2235	1652	4357	1226	28956	543	708	3986	8640	11442	8645	9046	3850	10091	139706	
Pennsylvania.....	May 52	62	539	42	10	54	6	666	6	8	53	135	256	118	205	41	241	2597
5 Mos. 379	291	2294	145	53	282	37	2753	5	6	253	851	657	474	795	194	1317	10738	
Rhode Island.....	May 296	70	1013	40														



SELLING SLANT OF THE MONTH!

MONEY-MAKING FACTS FOR DEALERS

AC Announces New, Specially Designed Spark Plugs for Peak Power Mower Performance!

Now, there is a line of quality spark plugs specially designed for power lawn mowers and other powered garden equipment . . . spark plugs that are sure to attract attention, sure to increase your spark plug sales!

With the bright plated universal terminal, the new spin-on gasket for easy installation, and the unique, easy-to-identify Green shell, these new AC Spark Plugs provide the best possible performance and reliability for all powered garden equipment.

When you stock this new line of AC Quality Spark Plugs, you stock only three types to cover 85% of the market! Small inventory — wide market!

Your customers will be on the look-out for Dealers who are stocking AC's new line of spark plugs. Make sure you have a supply . . . AC Quality Spark Plugs with the Green colored shell!

For marketing information concerning this new line of AC Spark Plugs, Dealers are invited to call their local AC Representative or write Dept. A., AC Spark Plug Division, Flint, Michigan.



AC Spark Plug  The Electronics Division of General Motors



SELLING SLANTS

MONEY-MAKING FACTS

Offer the New **AC** In-Line Fuel Filter

traps 5 times more

filters 10 times longer

costs about $\frac{1}{2}$ less



Forget all you've heard about expensive gasoline filters. The new AC In-Line Disposable Gasoline Filter is a profitable, fast-moving sales item for about $\frac{1}{2}$ the cost of competitive filters.

The new AC In-Line Gasoline Filter protects against carburetor wear, flooding and stalling 8 to 10 times longer than conventional filters, 25 to 30 times longer than ceramic types. Its extra-large 75-sq.-in. surface, with the unit's extra-fine resin impregnated filter paper, traps contaminants as small as 10 microns — in contrast to the 50 microns rating of other designs. And, the extra-large filtering area

eliminates a costly built-in by-pass, reducing unit cost to nearly half that of other types.

The AC Disposable Gasoline Filter installs in the fuel line between pump and carburetor and may be mounted horizontally or vertically without brackets. It operates on any gasoline engine . . . with a flow rate far in excess of competitive types and more than adequate for any modern car. The unit weighs only 2½ ounces and measures only 2" by 3".

Contact your AC supplier. Ask for information concerning the new AC In-Line Disposable Gasoline Filter. **Its special low price . . . ONLY \$1.80 — complete with fittings.**

AC SPARK PLUG  THE ELECTRONICS DIVISION OF GENERAL MOTORS

OF THE MONTH !

FOR DEALERS

NOW—PLATINUM PERFORMANCE FOR AUTO OWNERS!

NEW AC PLATINUM ELECTRODE SPARK PLUGS!



AC Platinum Electrode Spark Plugs are packaged in this dramatic new premium quality carton



The same quality and performance that goes into high performance AC Aircraft Spark Plugs is now available in the new AC Platinum Electrode Spark Plugs for automotive applications.

Specially designed for extreme power applications — cars, trucks, marine engines, and commercial engines — AC Platinum Electrode Spark Plugs deliver longer service over a wider heat range than is possible with conventional plugs of equivalent size. They offer greater reliability and require less servicing than ordinary spark plugs.

Other outstanding features of these premium quality AC

Spark Plugs include — new universal terminal — new centrifugally cast silver core — new spin-on gasket — new, longer insulator tip — and, of course, new *Platinum* electrodes!

AC Platinum Electrode Spark Plugs present an entirely new and different approach to the problem of providing longer spark plug life and greater resistance to fouling. Ask your AC Supplier for complete information.

Only Two AC Platinum Electrode Spark Plug Types (440P) and (M425P) Cover 73% of All Cars — 53% of Commercial Applications — 92% of Marine Applications!

AC SPARK PLUG  THE ELECTRONICS DIVISION OF GENERAL MOTORS





SELLING SLANTS

MONEY-MAKING FACTS

ACon-O-Mizer

...a new type Fuel Pressure Regulator for Automotive Engines



Improved performance with improved economy . . . that's what your customers are interested in these days . . . and that's just what the AC ACon-O-Mizer offers!

What the ACon-O-Mizer Is . . .

It's a fuel pressure regulator which can be installed between the fuel pump and the carburetor and is actuated by vacuum from the manifold.

What the ACon-O-Mizer Does . . .

It permits maximum acceleration and high speed operation with reduced fuel waste, and at the same time reduces flooding and stalling. Under normal driving conditions, the unit regulates fuel pressure at a constant one and one-half pounds per square inch. When greater engine power is required, the unit permits full pump pressure to the carburetor. This allows correct fuel pressure regulation at normal speeds and also at maximum acceleration.

What is the ACon-O-Mizer Market . . .

All car and truck owners who are interested in improved performance and gasoline economy are prospects for the ACon-O-Mizer. Carrying a low list of only \$9.90, the ACon-O-Mizer quickly pays for itself!

- * Provides greater fuel economy through uniform regulation of fuel flow.
- * Helps prevent stalling, flooding and fuel waste.
- * Provides full performance under acceleration and constant speed operation.
- * Only one type, GF-57, covers the passenger car and truck market.

Dealer Profit Schedule

	1-11	12 or more
YOUR COST	6.44	5.45
YOUR SELLING PRICE*	9.90	9.90
YOUR PROFIT	3.46	4.45

*Plus installation

Call Your Regular



Supplier

OF THE MONTH !

FOR DEALERS

Test for Cap Sales with the **NEW AC PRESSURE CAP AND RADIATOR TESTER**



The new AC Tester is different. And, its simple operation makes this about the easiest-to-use pressure tester you've ever seen!

The new design of the AC Tester provides an expansion device for sealing inside the radiator filler neck instead of on the shoulder. And, the pump action of this tester is far easier—and quicker—to operate than a bulb-type.

You can use the new AC Tester to check radiator pressure caps and cooling systems on all types of passenger cars, and most trucks. To do this big job, you use only one adapter . . . the universal adapter already attached to the AC Tester. The small number of trucks having a $2\frac{1}{8}$ " filler neck can be tested by ordering the following adapters—Radiator RP 32, or Pressure Cap RP 22.

An easy-to-read pressure gauge tells you in seconds

if a cap is good or bad or whether there is a leak in the cooling system. The bezel adjustment on the gauge allows you to test from 1 to 30 pounds pressure. The new AC Radiator Cap and Cooling System Tester is made of durable steel, and it has a heavy coating of bright, rust-resistant chrome.

Get the new AC Tester today!

Get \$5.00 Credit with Trade-In!

That's right! You can trade in your old cap tester and receive the new AC Tester for only \$13.45. Without a trade-in you can get the AC Tester at the special low price of \$18.45.

AC SPARK PLUG  THE ELECTRONICS DIVISION OF GENERAL MOTORS

Car & Truck SHOP KINKS

Replacing Chevy's Powerglide Governor

On 1955-1959 Chevrolet powerglide, you can cut time by two-thirds in removing and replacing the governor assembly. In place of removing rear mount and lowering transmission, take a hammer and make a dent in floor pan, which isn't noticeable inside of car, thus enabling you to take the governor out. *J. D. Brunson, Welborn Chevrolet Co., Honea Path, S.C.*

Removing Power Steering Oil Seals

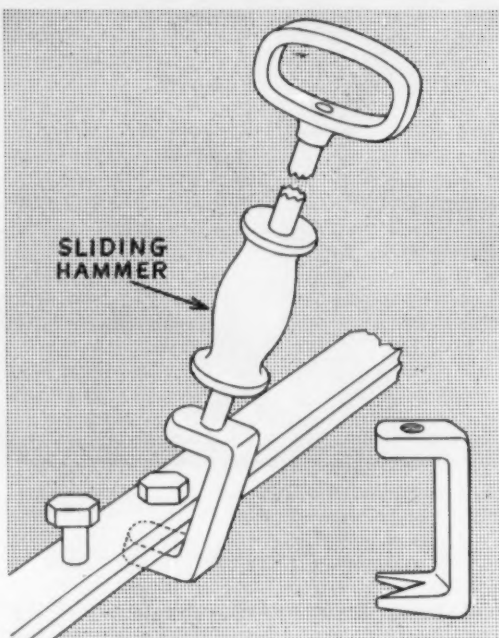
The March issue of Motor Age, carries a shop kink to remove powersteering oil seals, by drilling holes in seal and prying the same out. Here is a much quicker and neater way. Knowing our seal is leaking tells us we have oil pump pressure, so we disconnect pitman nut and arm, seal lock ring, and fill steering reservoir with oil (recommended type). Place a pan under steering housing on floor, turn steering wheel, with the motor running, either way until it stops. Hold this position until seal is blown out into pan. *Harry Padden, Charles Oldsmobile and Cadillac, Bristol, Penna.*

(Continued on page 105)

\$25
FOR THE KINK
OF THE MONTH

\$7.50
PAID FOR
EACH KINK

August Shop Kink Winner: Impact Sliding Hammer



WHEN one has a stuck bolt or pin or the need to strike a blow from underneath to drive in or pull out similar to that shown in the illustration, it can be done much better with an impact sliding hammer such as I have made. I have made several types of attaching heads of various depths and lengths and styles to go on the pull rod and sliding hammer. *Chas. H. Willey, Penacook, N.H.*

*It pays to identify
yourself as a
Delco Dealer*

*New profit opportunities
on the popular Delco DC-12*

*Plastic window display
is a real
traffic stopper*

*It's only the
beginning of a
campaign to
sell more Delcos*

*C'mon
along on a
battery selling
spree!*

*Make the most with the
battery that gives the most—
Delco, of course*

*Sure way
to fill
the till*



100% FRESH

*3-dimensional,
4-color sign
that goes up
easy (so do profits)*

*Your customers
will see
"Freshie" on TV,
in national magazines
and newspapers*

*Get all the facts and
materials from your
Delco Battery distributor*

QUALITY BUILT BY DELCO-REMY DISTRIBUTED NATIONALLY THROUGH



GENERAL MOTORS STARTS WITH DELCO BATTERIES

1959 Tune-up—Alignment Specifications

MAKE AND MODEL	ENGINE	No. of Cylinders Bore and Stroke (In.)	Maximum Brake H.P.	TUNE-UP DATA										FRONT END ALIGNMENT			
				Spark Plug Make and Size (mm)	VALVES				IGNITION				Steering Axis Inclination (Deg.)	Caster (Deg.)	Camber (Deg.)	Toe-In (In.)	
					Seat Angle	Operating Tappet Clearance		Breaker Point Gap (In.)	Cam Angle (Deg.)	Spark Plug Gap (In.)	Timing Spark Occurs T.C.						
						Inlet (Deg.)	Exhaust (Deg.)					Inlet (In.)					Exhaust (In.)
AMERICAN MOTORS CORP.																	
Rambler.....	6-5802, 5804, 5804-1, 5806, 5806-1	6-3 1/2 x 3 1/4	90	CA-14	45	45	.016C	.016C	.016	32	.035	30	8	0 to 1 1/2 P	1/2 N to 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-5810	6-3 1/2 x 3 1/4	127	CA-14	45	45	.012H	.016H	.016	32	.035	30	8 11'	0 to 1 1/2 P	1/2 N to 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-5820	6-3 1/2 x 3 1/4	215	CA-14	30	45	.012H	.014H	.016	30	.035	30	8 11'	0 to 1 1/2 P	1/2 N to 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-5880	6-4 x 3 1/4	270	CA-14	30	45	Hyd	Hyd	.016	30	.035	30	8 11'	0 to 1 1/2 P	1/2 N to 1/2 P	1/2 to 1/2	1/2 to 1/2
CHRYSLER CORP.																	
Chrysler.....	6-MC1-L	6-4 1/2 x 3 1/2	305	AL-14	45	45	Hyd	Hyd	.017	30	.035	100	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-MC2-M	6-4 1/2 x 3 1/2	325	AL-14	45	45	Hyd	Hyd	.017	30	.035	100	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-MC3-H	6-4 1/2 x 3 1/2	350	AL-14	45	45	Hyd	Hyd	.017	30	.035	100	6 1/2	0 to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-MC3-H (300-E)	6-4 1/2 x 3 1/2	380	AL-14	45	45	Hyd	Hyd	.017	30	.035	100	6 1/2	0 to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
De Soto.....	6-MS1-L	6-4 1/2 x 3 1/2	295	AL-14	45	45	Hyd	Hyd	.017	30	.035	100	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-MS2-M	6-4 1/2 x 3 1/2	305	AL-14	45	45	Hyd	Hyd	.017	30	.035	100	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-MS3-H	6-4 1/2 x 3 1/2	325	AL-14	45	45	Hyd	Hyd	.017	30	.035	100	6 1/2	0 to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-MS3-H (Adventurer)	6-4 1/2 x 3 1/2	350	AL-14	45	45	Hyd	Hyd	.017	30	.035	100	6 1/2	0 to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
Dodge.....	6-MD1-L	6-3 1/2 x 3 1/2	135	AL-14	45	45	.010H	.010H	.020	39	.035	2 1/2 B	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-MD2-L	6-3 1/2 x 3 1/2	255	AL-14	45	45	Hyd	Hyd	.017	30	.035	100	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-MD3-L, MD3-M	6-4 1/2 x 3 1/2	295	AL-14	45	45	Hyd	Hyd	.017	30	.035	100	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-MD3-H	6-4 1/2 x 3 1/2	305	AL-14	45	45	Hyd	Hyd	.017	30	.035	100	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-D-300	6-4 1/2 x 3 1/2	320	AL-14	45	45	Hyd	Hyd	.017	30	.035	100	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
Imperial.....	6-MY1-L, MY1-M, MY1-H	6-4 1/2 x 3 1/2	350	AL-14	45	45	Hyd	Hyd	.017	30	.035	100	6 1/2	0 to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
Plymouth.....	6-MP1-L, MP1-M	6-3 1/2 x 3 1/2	132	AL-14	45	45	.010H	.010H	.020	39	.035	2 1/2 B	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-MP2-L, MP2-M, MP2-H	6-3 1/2 x 3 1/2	230	AL-14	45	45	.010H	.010H	.017	30	.035	100	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-MP2-P	6-3 1/2 x 3 1/2	260	AL-14	45	45	.010H	.010H	.017	30	.035	100	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-Golden Commande	6-4 1/2 x 3 1/2	305	AL-14	45	45	Hyd	Hyd	.017	30	.035	7 1/2 B	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
FORD MOTOR CO.																	
Edsel.....	6-57F, 58D, 63F, 64C, 71E, 71F	6-3 1/2 x 3 1/2	145	Ch-18	45 1/2	45 1/2	.019H	.019H	.025	37	.034	40	6 1/2	0 to 1 P	1/2 P to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-57F, 58D, 63F, 64C, 71E, 71F	6-3 1/2 x 3 1/2	200	Ch-18	45 1/2	45 1/2	.019H	.019H	.015	27	.034	30	6 1/2	0 to 1 P	1/2 P to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-57B, 58B, 63B, 71E, 71F, 76E	6-4 x 3 1/2	225	Ch-18	30 1/2	45 1/2	Hyd	Hyd	.015	27	.034	30	6 1/2	0 to 1 P	1/2 P to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-Power Option	6-4 1/2 x 3 1/2	303	Ch-18	30 1/2	45 1/2	Hyd	Hyd	.015	27	.034	30	6 1/2	0 to 1 P	1/2 P to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
Ford.....	6-Custom 300, Fairlane, Fairlane 500	6-3 1/2 x 3 1/2	145	Ch-18	45 1/2	45 1/2	.019H	.019H	.025	37	.034	40	6 1/2	0 to 1 P	1/2 P to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-Custom 300, Fairlane, Fairlane 500	6-3 1/2 x 3 1/2	200	Ch-18	45 1/2	45 1/2	.019H	.019H	.015	27	.034	30	6 1/2	0 to 1 P	1/2 P to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-Special Option	6-4 x 3 1/2	225	Ch-18	60 1/2	45 1/2	Hyd	Hyd	.015	27	.034	30	6 1/2	0 to 1 P	1/2 P to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-Power Option	6-4 x 3 1/2	300	Ch-18	60 1/2	45 1/2	Hyd	Hyd	.015	27	.034	30	6 1/2	0 to 1 P	1/2 P to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-Thunderbird	6-4 x 3 1/2	300	Ch-18	30	45	Hyd	Hyd	.015	27	.034	40	6 1/2	1/2 P to 1 1/2 P	1/2 P to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-Thunderbird Power Option	6-4 1/2 x 3 1/2	350	Ch-18	45	45	Hyd	Hyd	.015	27	.034	40	6 1/2	1/2 P to 1 1/2 P	1/2 P to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
Lincoln.....	6-All	6-4 1/2 x 3 1/2	350	Ch-18	45	45	Hyd	Hyd	.015	27	.032	60	7 20'	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
Mercury.....	6-Montclair	6-3 1/2 x 3 1/2	210	Ch-18	45	45	.019H	.019H	.015	27	.032	30	7	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-Montclair	6-4 1/2 x 3 1/2	322	Ch-18	45	45	Hyd	Hyd	.015	27	.032	60	7	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-Park Lane	6-4 1/2 x 3 1/2	345	Ch-18	45	45	Hyd	Hyd	.015	27	.032	60	7	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
GENERAL MOTORS CORP.																	
Buick.....	6-4400	6-4 1/2 x 3 1/2	250 1/2	AC-14	45	45	Hyd	Hyd	.015	30	.033	50	7	1 1/2 N	1/2 P	1/2 to 1/2	1/2 to 1/2
.....	6-4600, 4700, 4800	6-4 1/2 x 3 1/2	325	AC-14	45	45	Hyd	Hyd	.015	30	.033	120	7	1 1/2 N	1/2 P	1/2 to 1/2	1/2 to 1/2
Cadillac.....	6-60, 62, 75	6-4 x 3 1/2	325 1/2	AC-14	44	44	Hyd	Hyd	.016	30	.035	50 1/2	4	1 1/2 N to 1 1/2 N	1/2 N to 1 1/2 P	1/2 to 1/2	1/2 to 1/2
Chevrolet.....	6-1100, 1500, 1700	6-3 1/2 x 3 1/2	135	AC-14	31	40	Hyd	Hyd	.019	32	.036	50	7 11'	1 1/2 N to 1 1/2 P	0 to 1 P	1/2 to 1/2	1/2 to 1/2
.....	6-1200, 1600, 1800	6-3 1/2 x 3 1/2	185	AC-14	48	40	Hyd	Hyd	.019	30	.035	40	7 11'	1 1/2 N to 1 1/2 P	0 to 1 P	1/2 to 1/2	1/2 to 1/2
.....	6-Engine Option	6-4 1/2 x 3 1/2	250	AC-14	48	40	Hyd	Hyd	.019	30	.035	40	7 11'	1 1/2 N to 1 1/2 P	0 to 1 P	1/2 to 1/2	1/2 to 1/2
.....	6-907	6-3 1/2 x 3 1/2	230	AC-14	48	40	Hyd	Hyd	.018	30	.036	40	4	1 1/2 P to 2 1/2 P	1/2 N to 1 1/2 P	0 to 1/2	0 to 1/2
Oldsmobile.....	6-88	6-4 x 3 1/2	270	AC-14	45	45	Hyd	Hyd	.016	30	.030	50	10	0 to 1 N	1 1/2 N to 1 1/2 P	0 to 1/2	0 to 1/2
.....	6-980, 98	6-4 1/2 x 3 1/2	315	AC-14	45	45	Hyd	Hyd	.016	30	.030	50	10	0 to 1 N	1 1/2 N to 1 1/2 P	0 to 1/2	0 to 1/2
Pontiac.....	6-5921, 5924	6-4 1/2 x 3 1/2	245	AC-14	30	45	Hyd	Hyd	.016	30	.036	60	4 50'	1 N to 2 N	1 1/2 N to 1 1/2 P	0 to 1/2	0 to 1/2
.....	6-5927, 5928	6-4 1/2 x 3 1/2	260	AC-14	30	45	Hyd	Hyd	.016	30	.036	60	4 50'	1 N to 2 N	1 1/2 N to 1 1/2 P	0 to 1/2	0 to 1/2
STUDEBAKER-PACKARD CORP.																	
Studebaker.....	6-595	6-3 x 4	90	Ch-14	45	45	.016C	.016C	.020	39	.031	20	6	1 N to 2 1/2 N	0 to 1 N	1/2 to 1/2	1/2 to 1/2
.....	6-59V	6-3 1/2 x 3 1/2	180	Ch-14	45	45	.024H	.024H	.016	31	.036	40	6	1 N to 2 1/2 N	0 to 1 N	1/2 to 1/2	1/2 to 1/2

ABBREVIATIONS

1—Left only; right, 1/2 N to 1/2 P.
 1/2—When equipped with automatic transmission.

1—Eldorado models, 345.
 1/2—Eldorado models, 7 1/2 B.
 AC—A. C. Spark Plug Div.
 AL—Electric Auto-Lite Co.

B—Before top center.
 C—Cold.
 CA—Champion or Auto-Lite.
 Ch—Champion Spark Plug Co.

H—Hot.
 Hyd—Hydraulic valve lifters.
 N—Negative.
 P—Positive.
 TC—Top center.

particularly
**NOW'S A GOOD TIME
FOR A NEW LINE**

It doesn't pay to go along with a weak line. Your battery line, for instance. Is it a good deal... or merely a bad habit? With the Fall-Winter sales rush just around the corner, now's the smart time to look it over.

If your present line gives you adjustment headaches, you're losing time and money. But when you take on Exide, you'll have batteries that stay sold because they're built to the highest quality standards.

Or maybe profits are down because the brand you carry pushes low-price batteries? With Exide it's easy to step up sales to higher grade and longer profit types — and get full price, too!

Are you losing sales because your line doesn't appeal to owners of all makes of cars? Exide gives you universal appeal... just what you'd expect from the most respected name in batteries.

Do dry charge sales cut into profits because you have to pay for acid? With Exide you get acid free.

When Exide is your line, you know you have a good deal. That's because batteries are our business... our only business. For more information, call your Exide distributor or write: Exide Automotive Division, Box 6266, Cleveland 1, Ohio.

When it's an



...you start making money!

From 16,000 to 450,000 gallons per month in 34 years with Texaco!

Here is another case history proving that good men can "grow with Texaco." It's the story of Consignee Charles H. Miller, Miller Oil Co., Zanesville, Ohio.

Mr. Miller teamed up with Texaco in 1925. "At that time, we had a thruput of about 16,000 gallons a month," he says. "Today we are averaging better than 450,000 gallons a month."

Mr. Miller has a sound formula for success in the petroleum industry.

"First, you must have products known and accepted by car owners from coast to coast," he says. "Also of great importance is a consistent program of Dealer training. If they are properly trained in every phase of station operation, the Consignee or Distributor can be assured of a solid future.

"We like to do business with Texaco," he says. "They give us complete cooperation, and you can trust the man behind the contract."



Here is "Texaco Town Hall," where Mr. Miller conducts training conferences for his Dealers. Emphasis is placed on salesmanship, product and technical information. The program has

developed a group of capable and aggressive Dealers. As a builder of public good will, "Texaco Town Hall" also serves as a Conference Room for the people of Zanesville.



Dispatcher Earl Search gives orders to driver of this 4,000-gallon semi-tractor unit. Mr. Search is also the Bulk Plant Manager, with 25 years of service. Six truck units are required to service the firm's operation.

Why there's a solid future with Texaco

Here are 6 reasons why Dealers and Distributors grow with Texaco:

1. *The best petroleum products*, known and accepted by car owners nationwide. Continuous research and development insure that Texaco will always have outstanding products.
2. *The best and biggest national advertising program* . . . constantly selling Texaco Dealers to car owners everywhere.
3. *The best point-of-sale and direct mail promotional material* to help bring in motorists and bring them back!
4. *The best customer credit card* — in fact,

the only petroleum credit card honored under one sign nationwide.

5. *The best retailer policy* — Texaco helps its Dealers to market nationally-advertised and accepted TBA products.

6. *The best opportunity to cash in on "touring" business* — because Texaco customers at home like to stop at Texaco stations when on the road. This means you have more than 40,000 other Texaco Dealers helping you.

A solid future is one of the advantages of being a Texaco Dealer or Distributor. There may be an opportunity for you. Investigate . . . send this coupon to:



This modern station, operated by Texaco Dealer Tom Cover, is typical of the Miller Oil Company's 41 Dealer outlets. These Dealers have a total of 445 years of service. 24 have received Texaco Dealer awards for 10 years or more, and 3 for 30 years.

Key personnel who are important to the company's success. They have a total service record of more than 100 years! Left to right: Robert E. Davis, Sr.; Mr. Miller; Harold Wiles; Earl Search;

Willard E. King; and Mr. Miller's son, James E. Miller. Special service awards, pension and insurance plans and other benefits are responsible for the low turnover in personnel.



SALES MANAGER
TEXACO INC.
135 E. 42nd Street, New York 17, N. Y.

I would like to get complete information about the possibility of teaming up with Texaco as a ☐ Dealer, ☐ Consignee, ☐ Distributor. (Please check).

NAME

STREET

CITY

STATE

*Following are prices at factory for cars with standard equipment as of August 1, 1959
State or local taxes, transportation and finance charges and optional equipment are extra.*

Following are prices at factory for cars with standard equipment as of August 1, 1959
State or local taxes, transportation and finance charges and optional equipment are extra.

* Delivered Prices of 6 cyl. models are \$118 less than the 8 cyl. models.

† Prices of six cyl. models are \$119 less than 8 cyl. models.

▲ Six cyl. models are \$110 less than the 8 cyl. models.

Management Clinic



Why emphasize SHOP SAFETY?

Owner often held responsible for accident on his premises

Not so long ago a flourishing shop went into receivership. The reason on the surface seems fantastic: Its owner permitted one of the employees to use a hammer which unfortunately had a loose head. This head flew from its handle. It struck a customer who happened to be standing in its path—and subsequent damage suits overwhelmed the operation.

This is why it pays to always bear in mind that an owner is often held responsible for many types of accidents which may be incurred on the premises. Generally, the case turns on whether the cause of the accident is attributed to the owner's negligence.

So as to minimize the risks, why not ask yourself the following questions:

Are all floor surfaces safe? In the sales section this means that

they must be clean enough for persons to walk upon them without slipping or stumbling. In the service area they must be free of all grease spots, as any rubber heeled person may easily slip and suffer what may be a bad fall. This is particularly important in the vicinity of automotive pits, as falls in such localities may be particularly serious. In addition, the cement apron of the pavement outdoors must be carefully free of all ice in the winter.

Tool Scattering Dangerous

Is there danger of injury from automotive tools? The answer is "yes" if there are tools scattered on floor surfaces, if jack handles are carelessly left to protrude from under cars; if lifts, horses and packs are permitted to be used despite the fact that they're not in good working condition.

Is there danger of injury from automotive repair machinery? The answer is "yes" if the belting and gearing on lathes aren't protected by specially designed shields which prevent the clothing of the operator or any nearby-standing customer from being caught in the works. The operators of grinding wheels should be protected with similar guards. These guards prevent such wheels from flying apart. (The fragments may actually result in fatalities.) As an additional precaution, all operators should be required to wear protective goggles.

Is there danger of injury from fire? To prevent this means that (a) measures should constantly be practiced to avoid the fire hazard and (b) precautionary devices should be installed to extinguish small fires immediately.

(Continued on page 62)

Some operators feel that they've taken complete precautionary measures after installing one (or at most two) fire extinguishers, which are completely forgotten about once they're in place! This seems odd when one considers that fire is estimated by some to be the major hazard to be encountered in the repair

shop operation. On hand should be enough extinguishers which are especially designed to quench three different types of fires. These extinguishers should be regularly and properly maintained.

Fires caused by burning upholstery, burning wood, burning paper and burning rubber should

be quenched with water.

Fires caused by gasoline, oils and grease should be smothered with either chemicals or sand.

Fires which occur in live electrical equipment must be quenched with equipment which does not contain any kind of material that might be an electrical conductor. If this were the case, the person using it may suffer a fatal electrical shock.

Is the operation fully protected against accidents and hazards with adequate insurance? As a general rule this should include "public liability insurance." In addition, such a policy should include protection to you in case your tow truck and other moveable equipment does damage to others while on the highway.



"NATURALS" FOR OWNERS OF CARS WITH "WARNING LIGHTS"



1. STEWART-WARNER Twin Gauge Panel

Besides battery and oil warning lights, your customers need an ammeter and oil pressure gauge... to tell actual rate of current flow and thereby indicate if voltage regulator is set properly... to tell exact oil pressure in pounds, at any engine speed. Panel comes complete with two instruments.

Twin Gauge Dealer Assortment consists of self-selling display rack, window banner and four complete gauge kits. Assortment No. 366BR.



2. STEWART-WARNER Oil Pressure Warning Switches

These universal switches can be used as replacements for the original equipment switch on any car or truck. Designed to close electrical circuit and to light oil pressure warning light when pressure drops below 6 P.S.I. Easy to stock and identify. Attractive display card holds 12 switches... can be used on counter or wall.



INSTRUMENT DIVISION
STEWART-WARNER
CORPORATION

Call your Wholesaler Today!
Dept. BW-89, 1840 Diversey Parkway
Chicago 14, Ill.

Circle 359 on Inquiry Card, facing 3rd Cover



Casualty insurance: This covers the risk of damage to the plate glass in your show windows, the machinery in the service areas, the fixtures in the sales section, and the very buildings of your operation itself. For this and other types of insurance it is well to talk over the specialized needs of your operation with a reliable broker on a periodic basis. Then your coverage can be altered as your business grows and changes through the years.

Another Victor First!

NEW SERVICE FOR YOU!



Victor Oil Seals now packaged ONE to the carton

From now on, you will receive Victor Oil Seals packaged in individual cartons.

You gain real and practical advantages by this Victor innovation. It was developed entirely to give you better service, and here's what it does for you—

- protects each seal until used—no open cartons that permit the entry of dust and rust
- eliminates the need for breaking a two-seal package for just one seal

- prevents the chance of mixing look-alike seals which come from different cartons
- avoids having unwrapped and unidentified seals on hand; makes inventory-taking fast and easy

Your Victor Jobber now has many numbers in one-to-a-carton and is converting all stock as fast as possible. Keep asking for this new, convenient Victor oil seal package. Victor Mfg. & Gasket Co., P.O. Box 1333, Chicago 90, Ill. Canadian Plant: St. Thomas, Ont.



VICTOR

Sealing Products Exclusively

OIL SEALS • GASKETS • PACKINGS

The 100% Coverage Line—for Cars, Trucks, Tractors, Stationary Engines

Adjusting Master Cylinder End Play

The master cylinder push rod is not adjustable, but pedal play is adjusted by adding or removing shims from the mounting plate. The required clearance or brake pedal play should be 20

mm. or approximately $1\frac{3}{16}$ ". The easiest way to convert millimeters to inches is to multiply mm., by .040", the results will be close and approximate. As an example; 20 mm. x .040" = .800" or to the closest fraction $1\frac{3}{16}$ "

Brake lining is inspected in a

conventional manner. First, raise the car, remove the hub cap, then the dust cap, extract the cotter pin, remove the castellated nut. Replace the dust cap on the wheel hub to protect the bearings, and by grasping the wheel assembly, remove the wheel from the car. It will be observed by the illustration, that the brakes resemble the Lockheed type brake, used on Chrysler products for years. The anchors do not require an adjustment, just the cam for each shoe. They use a single brake return spring just below the wheel cylinder, and an additional retainer spring at the bottom of the shoes to retain them against the anchors.

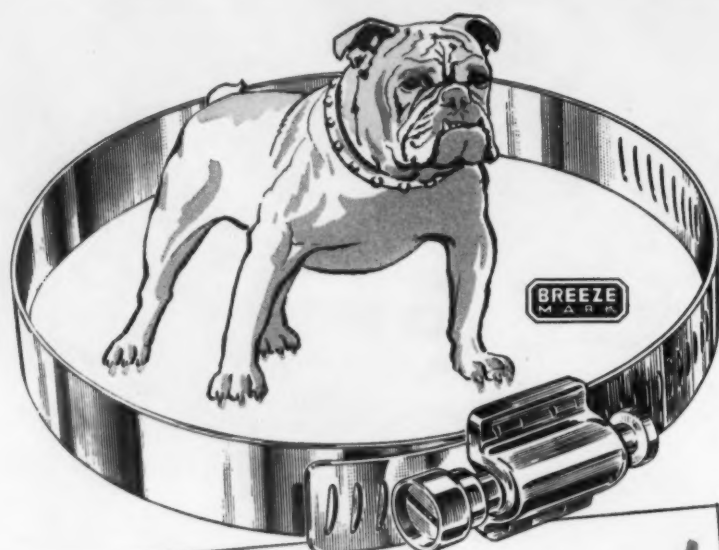
The normal checking procedures for brake condition hold true in the inspection of this brake. Peel back the dust cover of the wheel cylinder to inspect for fluid leakage past the piston seals.

Check the condition of the wheel grease seals (they have a drain off incorporated in the event of a seal failure for oil to the outside.) Examine the adjuster cams to see that they are free to turn. Removal and replacement of shoes are conventional. Bleeding of the brakes is best accomplished by the foot method, because metric adaptors generally are not furnished by bleeder tank manufacturers.

Unique Brake Adjustment

The outstanding service difference is in the adjustment of the brakes. The Simca factory recommend that the brakes be adjusted with the foot pedal fully depressed and locked in that position. Their reasons for adopting this type of adjusting method is that each mechanic has a different "feel" when adjusting brakes. The cam adjusters are retained in position by friction, and no ratchet device is provided.

This system would make every
(Continued on page 66)



Never lets go!

Tighten an AERO-SEAL Hose Clamp in place and no amount of vibration will snap its jaws open. You just can't shake it loose! An exclusive patented feature permits quick installation with just a few turns of the precision worm drive screw. Anti-corrosive bands and housings are of 302-18-8 stainless steel. 100% stainless also available. Best of all,

AERO-SEAL JETS tighten evenly all around—won't pinch or damage hose. No extra price for quick-attach JETS. Famous regular AERO-SEALS available if preferred. Get genuine AERO-SEALS and satisfy customers. Make full profit, too.

Aero-Seal JET
Quick-Attach Hose Clamps

**GET
NEW**

BT₃

**BALANCED TUNE-UP ...
THREE WAYS!**



**FASTER PROFITS! STEP-BY-STEP PROCEDURES! INCLUDES
CLEAN-OUT AND TUNE-UP!**

Here's a fast, new way to tune-up profits! It's BT₃... the new process that assures a balanced tune-up three ways. BT₃ includes step-by-step procedures and preliminary tests that cut time... boost profits... and mean new satisfied customers for you.

**ORDER ALL NECESSARY
PARTS FROM YOUR
UMS DISTRIBUTOR**

This modern, highly efficient method of tune-up means you buy only the parts you need—Rochester-GM Carburetor Carbon-X Chemicals, ignition points, condenser and Rochester-GM Carburetor Kleanout Kits. You end up with *more profit*... and a *qualified tune-up* your customers will rave about. See your United Motors Service distributor today!



**America's
number one
original equipment
carburetors**

ROCHESTER CARBURETORS

adjustment uniform and eliminate the variations in mechanic "feel." First, depress the brake pedal, and retain it with a pedal depressor. CAUTION; it would be advisable to disconnect the RED wire under the hood at the firewall fuse box to prevent a possible electrical fire. This wire controls current feed to all wires

under dash. There is always a chance that the pedal depressor could short some wire under the dash and with twelve volts pushing the current a disastrous fire could result. Applying the brakes of course would result in all shoes contacting the drums fully, giving zero shoe to drum clearance. Each square ended ad-

justor should then be brought into contact with its related brake shoe. Then move wrench in the release direction to take out the slack in the cam drive, but don't turn the cam. The amount that each cam is released should be controlled and equal. Simca states that this should be measured at the tire tread from the point where the slack is taken from the adjustor. They give this distance as: 60 mm., for tire size 5.50-5.75 x 15 and 55 mm., for 5.60 x 14. Converting these dimensions as before, we have 60 mm x .040" = 2.400" nearest fraction $2\frac{1}{32}$ " and for 55 mm. x .040" = 2.200" nearest fraction $2\frac{1}{64}$ ". Depending on the size tire, mark these dimensions by lines on a piece of cardboard.

Place the cardboard against the tire and line up one pencil mark with far end of wrench after slack has been removed. Release the cam adjustment until wrench lines up with opposite mark on cardboard guide. Repeat this operation at each shoe. Release the pedal depressor and check each wheel for free rotation. This method of adjustment results in a correct high pedal and uniform shoe to drum clearance for all four wheels. It eliminates guess work and results in a very satisfactory brake adjustment.

The hand brake is cable operated, using the rear brakes, similar to the arrangement on Buick and Ford as examples. The cable adjustment is by means of a cable shortening device incorporated in the cable equalizing bracket. Loosen the two bolts that clamp the cable in the bracket, slide the cable to proper distance and retighten the clamp bolts. The hand brake should begin to take hold at the 6th click of the handle and be fully locked by the 8th click. Later model cars will have a cable adjusting trunnion similar to domestic cars.

GUARANTEED'S *new* IGNITION Merchandiser* Program




DESIGNED FOR LARGE & SMALL REPAIR SHOPS SERVICING . . .

- ALL CARS
- TRUCKS
- TRACTORS
- INDUSTRIAL ENGINES
- MARINE
- FOREIGN CARS
- SMALL ENGINES

* with built-in LOCKS & KEYS

Cabinets FREE to all DEALERS
with the purchase of Guaranteed's
Popular Profit-Making Ignition Parts



GUARANTEED PARTS CO., INC.
SENECA FALLS, N. Y.

FULL DETAILS in New Merchandiser Manual FREE upon request

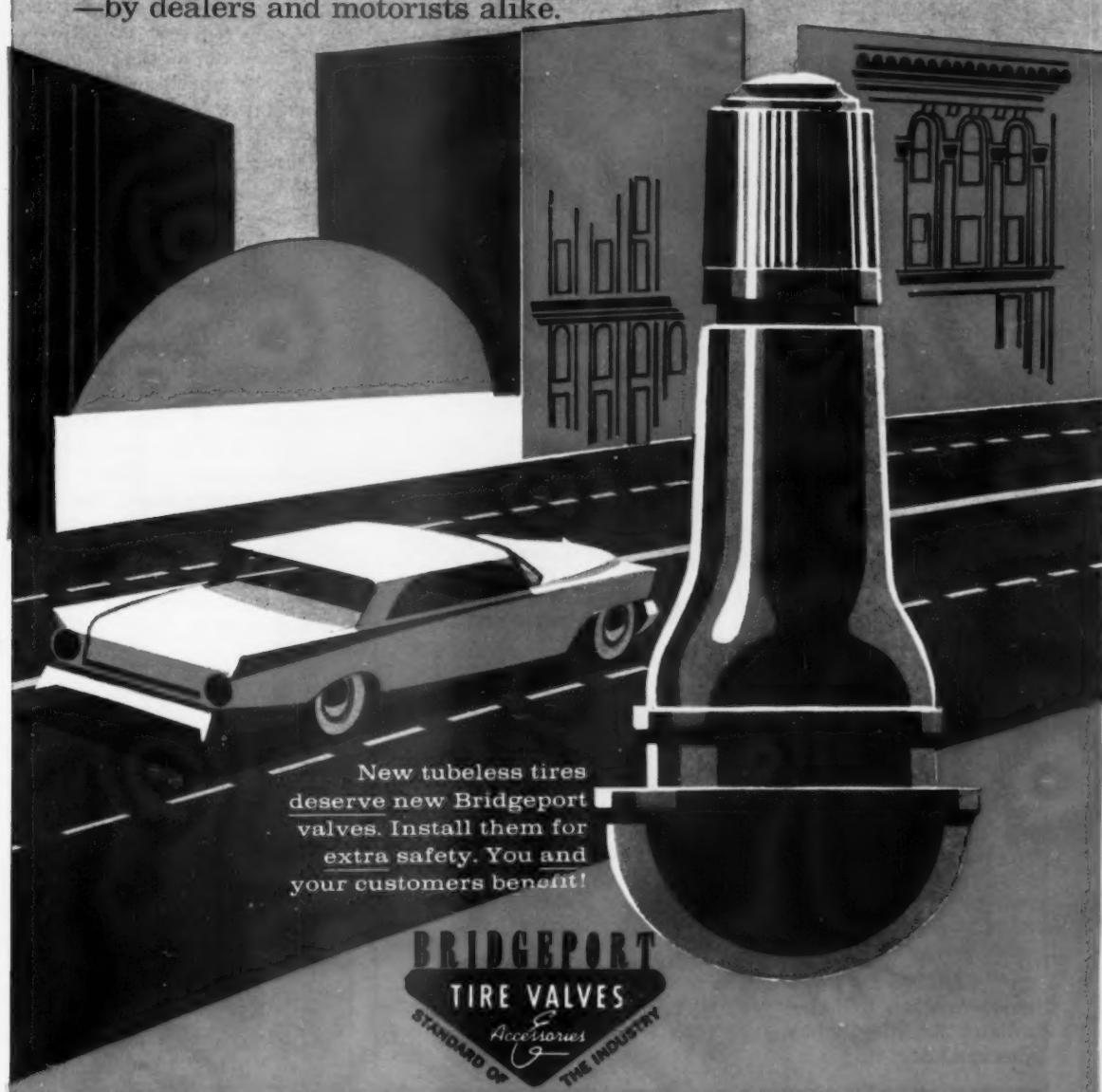


OVER 50 YEARS OF PROGRESS

*From Spider Lake, Wisconsin, to Webb, Texas...
Wherever people drive... you'll see*

BRIDGEPORT TIRE VALVES

Recognized in all 50 states for their *extra* quality and ruggedness
—by dealers and motorists alike.



New tubeless tires
deserve new Bridgeport
valves. Install them for
extra safety. You and
your customers benefit!



The Complete Quality Line of Tire Valves and Accessories — Sold by Leading Jobbers Everywhere
Bridgeport Brass Company • Bridgeport 2, Conn.

men and is ever ready to sit down with them and help solve their problems. He seems to be tops in his ability to keep the men on the job and off for as little time as possible on account of sickness, family reasons, etc. The spirit of cooperation prevails to such an extent that mechanics help each other with

their problems, and often a man on his off day will work for another man who faces an enforced absence. This pulling together in harness more than compensates the company for its liberality in paying the men, in sending them to service schools and in giving due recognition to them at Christmas and other times.

One can of
WYNN'S RADIATOR ADDITIVE
does the
whole job!



- ✓ SEALS LEAKS
- ✓ STOPS SQUEAKS
- ✓ STOPS RUST AND SCALE
- ✓ LUBRICATES WATER PUMP
- ✓ CLEANS ENTIRE COOLING SYSTEM

Complete Radiator Protection in 30 seconds

Think of all the time you can save—yours and your customers'—when you use Wynn's Radiator Additive... for one can of Wynn's Radiator Additive *does the whole job*. Stops trouble and prevents trouble. Think of the shelf space you'll save too. No more need to have a shelf full of radiator products when a can of Wynn's Radiator Additive does the whole job.

AMAZING DEMONSTRATION: A two minute demonstration will show you why Wynn's Radiator Additive is best—ask your Wynn's salesman about it.



THE *Proof* IS IN THE *Performance!*

Also available in Canada • 1151 West Fifth Street, Azusa, California

Putting the mechanic on a pedestal has also paid off in the minimum turnover in men. The service manager himself has been with the company for 23 years. Others range up to 17 years and most of them are over seven years. "We can't run 'em off," said Mr. Stovall, "and thank the Lord we don't want them to leave."

Part of Mr. Stovall's ability to get good men and to hold them is no doubt due to his own warm personality. He has framed certificates in his office showing that he is a member of the "Governor's Advisory Counsel" on employment counselling and he is a "Diversified Occupations" adviser to the Calhoun public schools. He worked with the G.I. training program for quite a while. He now works two high school boys part time in his shop under the "DO" program. In other words, he has a facility for taking a man and making a mechanic out of him.

"In our work I teach a man to diagnose the job first and then begin working later," said Mr. Stovall. "I don't want him to dive into a motor like a 'blind dog in a meat house.' He must first know what he is going to do; then do it. That is where the advice and counsel of the service manager or service supervisor comes in."



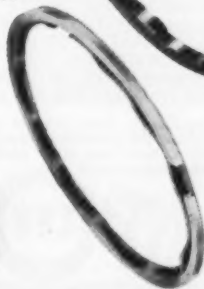
McQUAY-NORRIS

makes the most *Power-Packed* rings
in the world

The
Torsion-Tight
Top Fire Ring



The Duo
(Steel-Iron)
Compression
Ring



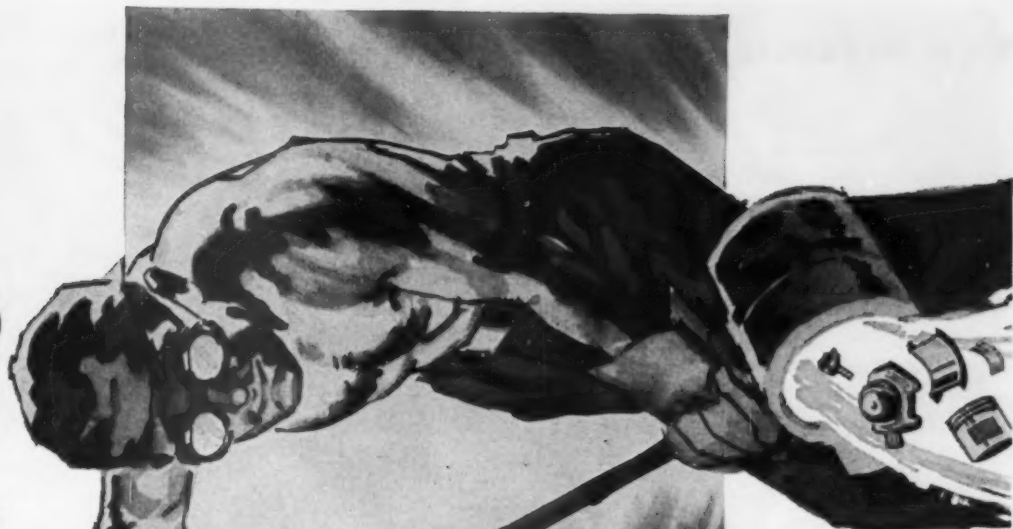
The
Famous "400"
Oil Ring with
Chrome-
Armored
Steel Rails



CHROME CONTROL

LEAK-PROOF®
PISTON RINGS

**NO NEED TO WORRY ABOUT
CUSTOMER SATISFACTION ...**
Leak-Proof piston rings are made
of electric furnace Phos alloy, the
longest wearing ring metal in
use ... AND ... the famous "400"
oil ring is in every set!



McQUAY-NORRIS MANUFACTURING CO. • ST. LOUIS • TORONTO

New Products Continued from page 45

"Power-Egg," the new ratchet screw driver features a sturdy, egg-shaped Tenite handle which contains an aluminum ratchet mechanism. Three SAE 1070 hardened steel drivers, $\frac{1}{4}$ inch, $\frac{3}{16}$ inch, and $\frac{5}{16}$ inch in size, with Tenite handles, complete the set. To operate, insert the correct driver into the ratchet mechanism, lock it in place; then

seat the screw, by turning the "Power-Egg" handle.

For more information, refer to New Product Information Post Card that faces inside back cover.

320. Gaging Set

Sunnen Products Company: An improved pin-fitting and rod-reconditioning gage is now available for fitting the new press-fit

rods, measuring clearance fit on all pistons and rods and sizing



the journal end of rods. Gage uses interchangeable points to cover a 3" range (.375" through 3.375" I.D.). It features a 3-color dial indicator with a "tenth" scale. One setting to pin size shows interference fits in red and clearance fits in green.

For more information, refer to New Product Information Post Card that faces inside back cover.

321. Carbon Remover

Oakite Products, Inc.: A solvent detergent designed to remove carbon from pistons and to clean a wide variety of engine parts has been announced. The new material, Oakite Composition No. 111, is effective mixed with water or with petroleum distillates. It may be used at room temperatures or heated to about 100 degrees F., and is rinsed with water or steam.

For more information, refer to New Product Information Post Card that faces inside back cover.

322. Tire Pressure Gauge



Dill Manufacturing Company: A counter display of passenger car tire pressure gauges, has been developed. The display holds six
(Continued on page 76)

this powerful **Feridium* anode**
MAKES THE BIG DIFFERENCE IN

LEE

Resin-weld* OIL FILTERS
THE ONLY FILTERS THAT COMPLETELY REMOVE BOTH SLUDGE AND ACIDS!

Of course, there are other big differences in LEE FILTERS that set them completely apart from all others. They feature **ONE-PIECE CONSTRUCTION** — **BUILT-IN NEOPRENE CENTER POST SEALS** — **MULTI-FLOW PERFORATED CENTER TUBE OUTLETS** — **TOP AND BOTTOM PLATED FINISH STEEL CAPS** — **PLATED FINISH STEEL SHELLS** (there's no paint to dissolve and contaminate the oil) — **FULL-FLOW UNRESTRICTED BODY SHELLS** (as many as 3,000 inlet and outlet apertures) — **HEAT-TREATED AND CURED ACCORDION-PLEATED, RESIN-IMPREGNATED, FULL-FLOW ELEMENTS** and the famous **FERIDIUM* ANTI-ACID ANODE CATALYST!**

Lee Resin-Weld* Filters conform to functional standards set by SAE, U.S. Army Procurement, Fort Belvoir Research and Development and initial equipment requirements of car manufacturers. Write for catalog.



*Feridium, Resin-weld, Discardit and Micralytic are the Registered Trade Marks of Lee Filter Corp. Patents Pending.

LEE FILTER CORP., North Arlington, N. J.





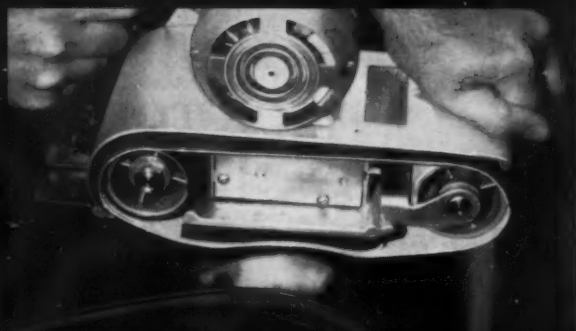
Dust-free sanding! Removes 90% of unhealthy fine dust. Direct, no-angle dust collection minimizes clogging—belts stay cleaner, last longer.



Faster sanding! Full 4" belt covers 20% more surface than ordinary 3" sanders. Quickly attaches to any vacuum cleaner... keeps shop cleaner, permits sanding and painting in the same area.



Easier sanding Less tiring to use because it's 20% lighter. Contour grip rear handle and front knob give bodyman complete control—greater ease of handling.



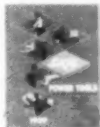
Contour sanding Exclusive, soft sponge rubber pad follows metal contours without digging in—eliminates gouging. Design permits sanding right up to panel edge.

4 good reasons why NEW SKIL DUST-FREE BELT SANDERS should be in every bodyshop



Fast-setting resin putties have cut body repair time in half for most shops but have created a dust problem. Developed to meet the bodyman's need for a dustless sander for resin putties, the NEW Model 445 SKIL 4" Belt Sander with vacuum dust pick-up makes body repairs even faster. This new SKIL dust-free sander is available now from your SKIL distributor. Ask him for a demonstration of this fast-moving profit-making sander, as well as the other new SKIL automotive tools. Ask him, too, for your FREE copy of the new SKIL 58-page Industrial Tool Catalog. Or, simply mail the coupon.

Another Skil basic automotive tool



**FREE! 58-page
Industrial Tool Catalog**

SKIL Corporation, Dept. MA-89
5033 Elston Avenue
Chicago 30, Illinois

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Toronto 9, Ontario

☐ Send name of nearest SKIL automotive distributor.

☐ Send copy of SKIL Industrial Tool Catalog.

Name _____

Address _____

City _____ Zone _____ State _____

Engine ServiceContinued from page 26

by pushing it into position with head of piston. Measure gap between ends of ring with feeler gage.

Install rings on pistons using a good installing tool to prevent breakage, or damage to pistons.

Crankcase Ventilation . . .
Crankcase ventilators must be clean. When gasoline is burned a

certain amount of water vapor is one of its by-products. Tests have proven that for every gallon of gas that is burned it produces more than a gallon of water. Most of this vapor is blown out through the exhaust system. Some of it, however, leaks down into the crankcase where it can have very destruc-

tive effects through the formation of sludge and acid. The acid is formed when the water combines with sulphur dioxide which is another by-product of combustion.

A clean and adequate crankcase ventilation system eliminates these hazards.

Some important "do's": Always install a new filter as part of a rering job. Nor overlook the cooling system. System should be reverse-flushed and all the hoses and connections carefully checked for water leaks. Then install a good rust inhibitor.

Carburetor air cleaners should be serviced according to manufacturers instructions. Dirty air cleaners should be serviced according to manufacturers instructions. Dirty air cleaners cause premature ring failures. In the case of the newer cars, procedure here is to throw away the old filter and install a fresh one.

Fuel Systems

Continued from page 39

vapor pressure created above the gas in the tank to apply pressure to the fuel. This increased pressure is just enough to prevent boiling or vapor lock. The other method is to install a pusher type of pump, close to, or in the gasoline tank. By installing a pump at this location close to the tank, or in the tank, the line from tank to carburetor will be under pressure. With this method very satisfactory results can be obtained. Of course this vapor lock problem is generally only encountered during the hot summer months. However, this condition could happen in the winter if the suction line is run near the exhaust.


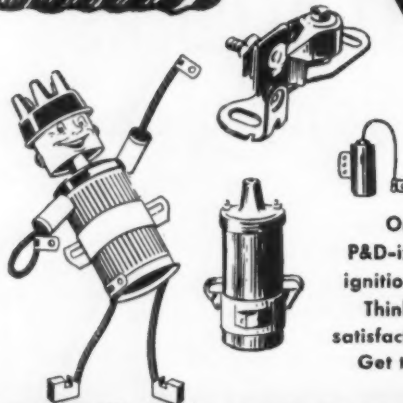
Percolation Described

This term "percolation" is sometimes confused with vapor
(Continued on page 74)

**FOR TOP
PERFORMANCE**

P&D-ize

**ALL IGNITION SYSTEMS
ONCE A YEAR**



Once a year is all you need to P&D-ize any ignition system—for all P&D ignition parts are warranted a full year! Think what that means in customer satisfaction and real power performance! Get the P&D-ize story now and start making bigger profits.

P&D MANUFACTURING CO., INC.
STARTING - LIGHTING - IGNITION
19-02 STEINWAY ST., LONG ISLAND CITY 5, N. Y.
Export Sales: Borg Warner International, 36 So. Wabash Ave., Chicago 3, Ill.

FRAM OFFERS YOU



1. *This top quality full quart* **VACUUM BOTTLE** *by* **THERMOS®** *at no extra cost!*

- **Big Value** ● **Nationally Advertised**
- **Triple Guaranteed**

Use this family size, full quart bottle for work, sports, picnics, vacations, etc. It keeps things hot or cold and has these exclusive features:

- **NEW NON-DRIP POURING LIP**
- **NEW EASY-OPEN, LEAK-FREE STOPPER**
- **NEW CUP HANDLE TOP**

FRAM D-9 OFFER! With your purchase of any 24 Fram Cartridges, you get one D-9 for \$2.40. D-9 contains one Vacuum Bottle by Thermos and one free Fram CH-6PL Cartridge in one carton. When you sell the free CH-6PL Cartridge at regular list, you recover the entire cost of the D-9!

2. *This hard-hitting* *second-half bonus kit!*

Fram now offers you a Big "Bonus" Dealer Kit that ties you in directly with Fram national advertising! It helps you sell not only filters—but oil changes, lube jobs and other high profit items!

Display all the material provided in Fram's Dealer Kit—to make high profit combination sales.

HERE'S WHAT YOU GET:

You get this dramatic oil filter cartridge display! A Fram Oil Filter sale is a key sale that helps you sell oil changes! Display this sign and make multiple profits!



You get these eye catching air filter "salesmen"! This streamer and display create demand for today's fastest growing accessory item! Use them to make quick sales! Get full details from your supplier.

SAVE 3¢ A GALLON
WITH A NEW FRAM AIR FILTER

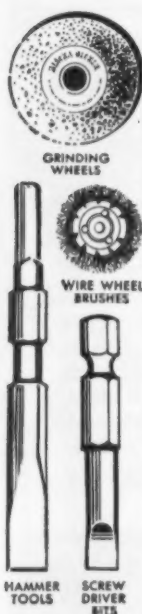


FRAM CORPORATION, Providence 16, R. I.



Speed work, cut costs with B&D accessories

Every job goes faster when you use the *right tool* . . . and the accessories *built for that tool*.



With over 2,000 accessories in the line, you're *always* right when you buy B&D because Black & Decker has the *right one* for every application.

So remember . . . whether your need is hammer tools, screw-driver bits, wire wheel brushes, grinding wheels, polishing pads or any other accessory for a Black & Decker tool . . . call your local Black & Decker Distributor. He stocks 'em all.

INSIST ON THE BEST

Black & Decker

ACCESSORIES DESIGNED FOR THE TOOL

Fuel Systems. Continued from page 72

lock. The only relation they have is that both are caused by heat. Each results in a different type of condition. In vapor lock we have no flow of gasoline to the carburetor, because of stoppage in the pump. In Percolation we have flow to the carburetor but the gasoline in the carburetor float bowl is drained automatically into the engine manifold after a shut down or during a hot idle.

All of us have watched the "old coffee perc" on the stove at home or in the shop. We observed that the coffee moves from the bottom of the pot up the stem into the glass top, then bubbles down thru the grinds. This will continue as long as there is water in the pot and heat under it.

Now transfer this to the carburetor: We find that the carburetor bowl represents the coffee pot; the main nozzle, the spout; the bowl cover, the lid. The heat is supplied by our engine underhood temperature. Some operating conditions can cause under-hood temperatures to soar up to 300 degrees F.

Can you imagine what happens to standard types of gasoline that boil from somewhere near 75 degrees F. to about 100 degrees F. (at atmospheric pressure) when subjected to this under-hood temperature?

The gasoline in the bowl starts to boil. These vapors move up the bowl vent tube into the air-horn. Being heavier than air, they fill the air-horn and bleed past the throttle valve into the manifold.

In addition, the gasoline in the main nozzle raises and overflows into the air-horn, then flows past the throttle valve into the engine manifold. As the fuel is raised in the nozzle by bubbles of vapor it is replaced with more fuel in a continuous stream as it

discharges into the carburetor throat.

Thus in a matter of seconds the bowl is pumped dry. This condition results in the engine stalling or rolling when idling. Also, the engine becomes very hard to start once it's shut down when hot.

To help overcome these conditions, the automobile and carburetor manufacturers have used various methods to offset this problem. The make-up of the gasoline has been changed by the refineries, so that in the winter they blend gasoline with light ends for easier starting. The summer gasoline is blended with heavy ends in order to retard the vapor point or percolating characteristics of the gasoline.

All carburetors now have vapor vents internally and externally. Some vents are mechanical devices, called anti-percolator valves; others are simply drilled metered orifices. Recently, thermostatically controlled air bleeds are being used to allow air to enter the manifold when the temperature reaches the vapor forming stage. These do not require any adjustment in the field; they must be replaced when faulty.

The mechanical type anti-percolator valves are adjusted by bending the valve lever to obtain the desired clearance between the pump arm and the anti-percolator valve. This adjustment must only be done in the correct order, recommended by the manufacturer. In some cases, you may have to add additional carburetor flange gaskets under the carburetor to raise it from the manifold. This cuts down on heat transfer from the manifold hot-spot to the carburetor. Sometimes, it is the only answer to a percolator problem, when all else fails.

Don't fail to check those heat
(Continued on page 84)

drilling . . . sanding . . . polishing . . .



7" Sander-Grinder



Automatic Polisher



No. 100 Impact Wrench

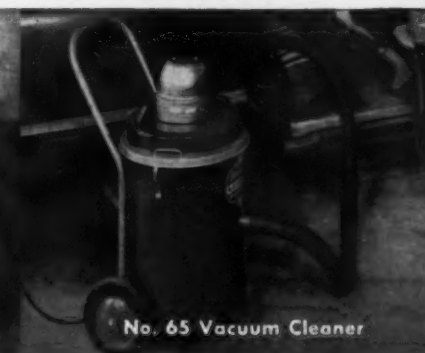
fastening . . . cleaning . . . grinding . . .



Vibro-Centric Systems

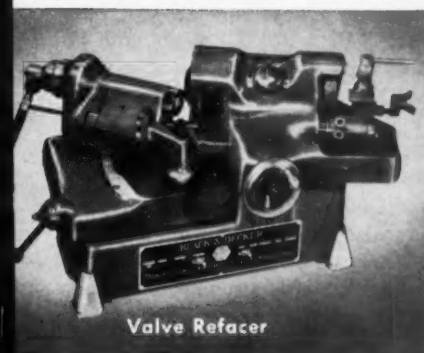


No. 300 Impact Wrench



No. 65 Vacuum Cleaner

whatever the job—large or small



Valve Refacer



Belt Sander



1/4" Standard Holgun®

Black & Decker® tools cut your costs!

Save time whenever you need a portable electric tool . . . simply call your local Black & Decker jobber. He stocks over 125 tools and 3,000 accessories to give you complete selection, fast delivery, tool know-how and personal service. Or, for complete tool information mail coupon at right.

Circle 361 on Inquiry Card, facing 3rd Cover



THE BLACK & DECKER MFG. CO., Dept. 5108, Towson 4, Md.

Send me information on.....

Name.....Title.....

Company.....

Address.....

City.....Zone.....State.....



☐ 1/2" Drills



☐ Bench Grinders



☐ Scrubguns®



☐ Nibblers

New Products Continued from page 70

gauges, each of which is visible through a clear plastic "blister." Individual gauges may be removed through a perforated back panel. The "blister" protects against pilferage and keeps gauges clean and attractive while on display.

For more information, refer to New Product Information Post Card that faces inside back cover.

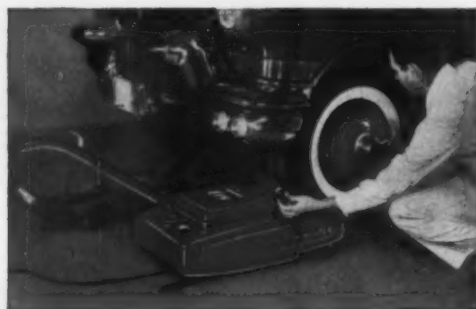
323. Liquid Iron

Chrysler Corporation's Cycleweld Chemical Products Div.: A new iron-like adhesive and sealer has been announced. The new product, Cycleweld Liquid Iron is a putty-like synthetic plastic that sets up into a substance like iron a few hours after it is mixed with a clear liquid hardener. After it has hardened it can be ground,

sanded, shaped, filed or drilled in the same manner as iron, company states. Cycleweld Liquid Iron dries in the air without heat or pressure. It will bond iron, bronze, wood, aluminum, brass, porcelain, marble, glass and other materials. It can be used in repair of corroded sheet metal such as on rocker panels, broken bumpers, car radiators, cracked castings, broken mirror brackets, rotted floor panels and other auto parts.

For more information, refer to New Product Information Post Card that faces inside back cover.

 If he can change a sparkplug...



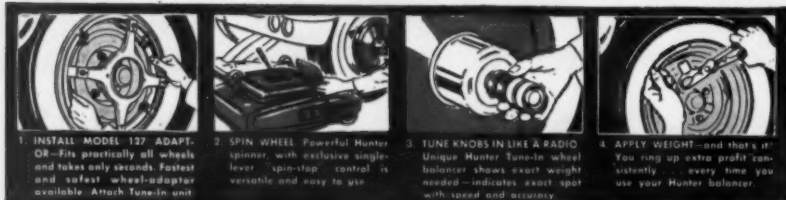
he can quickly learn to
**BALANCE WHEELS
ACCURATELY**
the HUNTER way
...LESS THAN 30 Minutes
to balance 4 wheels!



• No Balancing Specialist Needed

Now...any one of your men, with no previous experience, can easily earn \$600 or more extra profit for you every month. With a minimum of instruction—anyone can balance wheels quickly and accurately. The reason is simple—because the Hunter method is simple!

Hunter TUNE-IN Does The Balancing Job For You...Just Tune It In!



ELIMINATE ALL GUESSWORK

Anyone Can Quickly Become
A Wheel-Balancing Expert
The HUNTER Way. Mail The
Coupon Today And Get All
The Profitable Facts!



PIONEERS OF ON-THE-
CAR WHEEL-BALANCING

to HUNTER ENGINEERING COMPANY
Hunter Avenue and Lodge Road • St. Louis 24, Missouri

Please send complete information on the

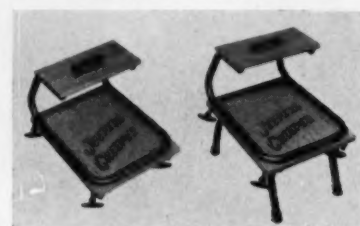
- ☐ Hunter Deluxe Tune-In Wheel Balancer
- ☐ Hunter Lite-A-Line Wheel Aligner

Name.....

Address.....

City.....State.....

324. Mechanics Seats

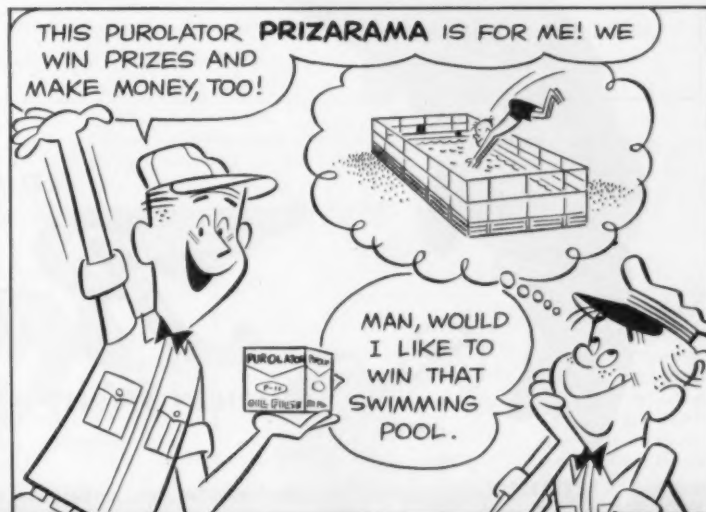
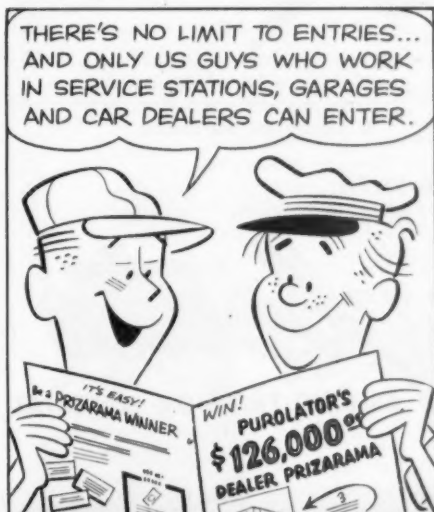
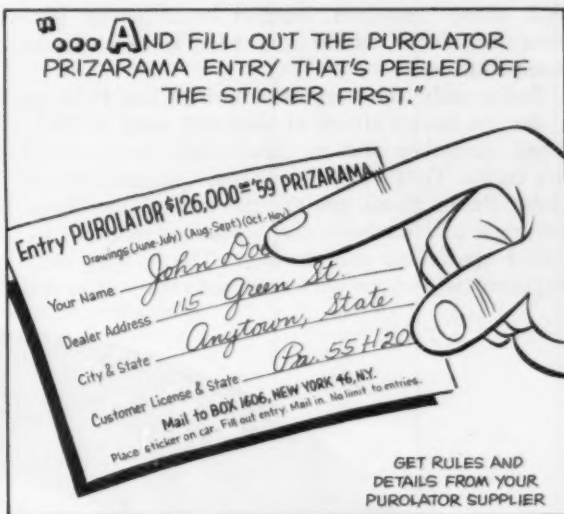


Lisle Corporation: Two new Mechanics Seats have been added to the Jeepers Creeper line. A model known as the "HI-LO" has four 3-inch Ralco Rollers, and is also equipped with folding legs so that it is adaptable for either mobile or stationary work. Seat is 14" high with legs folded; 20" high with legs extended. Lower shelf is designed to hold tools. It can also be used as a 2-step ladder when legs are extended. The same seat without legs is called the "LO-BOY".

For more information, refer to New Product Information Post Card that faces inside back cover.

325. Ignition Parts

Standard Motor Products, Inc.: An expanded line of small engine ignition parts has been announced. The line includes two service stocks, one for outboard motors and the other for power mowers, chain saws, light tractors and other small engine ap-
(Continued on page 80)



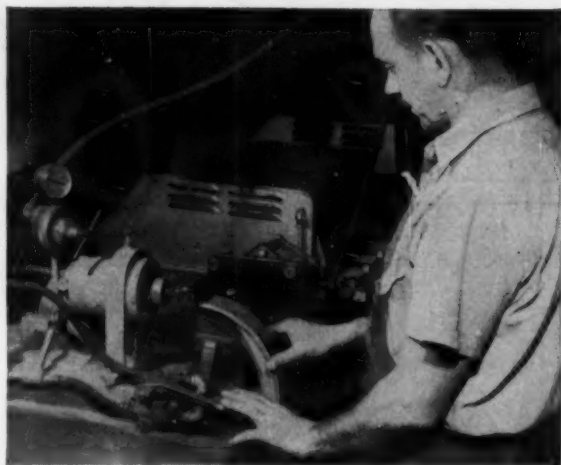
BE SURE YOU ENTER—START SENDING ENTRIES NOW!

Not all bonded brake shoes

What's more, there's nothing cheap about cheap bonded shoes—for sooner or later they cost you customers!

Right at this moment, down some back alley in an old garage, the fast-buck boys are cooking up a mess of linings and slapping them on shoes. In just a couple more hours they'll be peddling these murder weapons . . . at what looks like a very attractive price. We don't think you'll buy. You want to keep your customers safe and satisfied . . . and you can't with cheap, untested, bonded brake shoes. You need Raybestos to do a good job that means repeat business.

Today only the very best linings can hold up under the brutal attack of heat and wear on high-speed turnpikes and in jam-packed, stop-and-go city traffic. That's why Raybestos Contour Ground Lined Brake Shoes are the product of the finest materials and methods that ceaseless research by skilled specialists can develop. That's why only Raybestos is good enough for you and your customers.



Each brake shoe is shear tested to assure strength of bond



Illustrated is the new 1959 Chevrolet brake shoe with "fire band groove" to dissipate heat. Now available.

RELINE WITH

Raybestos
AMERICA'S BIGGEST SELLING FRICTION MATERIAL



RAYBESTOS DIVISION of Raybestos-Manhattan, Inc., BRIDGEPORT, CONN.

RAYBESTOS-MANHATTAN, INC., Brake Linings • Brake Blocks • Brake Fluid • Clutch Facings • Industrial Rubber • Mechanical Packings • Asbestos Textiles • Engineered Plastics • Sintered Metal Products • Rubber Covered Equipment • Laundry Pads and Covers • Abrasive and Diamond Wheels • Industrial Adhesives • Bowling Balls

are as safe as *Raybestos*

WHY RANK RAYBESTOS LINED BRAKE SHOES ABOVE ALL THE REST? SEE FOR YOURSELF—MAKE THIS COMPARISON TEST!		RAYBESTOS	OTHER BRAND
1. Approved by the United States Government under lined brake shoe specification No. KKK-B-00640		X	
2. Produced by a basic manufacturer of brake shoes		X	
3. Produced by a basic manufacturer of bonding cements		X	
4. Produced by a basic manufacturer of brake lining		X	
5. Laboratory-tested on dynamometers		X	
6. Proving ground tested on one of the largest company owned test fleets		X	
7. Contain no drum-scoring wire backed linings		X	
8. Every shoe shear tested for bond strength		X	
9. Ground as follows to meet vehicle manufacturers' specifications: a. Standard Contour Ground b. Contour Anchor Ground c. Contour Cam Ground		X	
10. For use on power or manually operated brakes		X	
11. Linings made by 8 different manufacturing processes		X	
12. Right combination of linings for each make and model car		X	
13. Produced by supplier of brake linings to original equipment vehicle manufacturers		X	
14. Branded with manufacturer's name, number and shoe position		X	
15. Came in sealed boxes for customer protection		X	
16. Reduce your overall investment in cores		X	
17. Give maximum coverage with minimum inventory, yet have no improper substitutions		X	
18. Bonded under factory specifications and supervision		X	
19. Linings properly positioned on shoes		X	
20. Acclaimed the first choice of car owners and the trade in independent surveys		X	
21. Advertised to car owners in national magazines and on network radio		X	

If you would like a large-size copy of this important comparison chart for your own ready reference, write Raybestos Division of Raybestos-Manhattan, Inc., Bridgeport 2, Conn.

CHECK THE WAYS RAYBESTOS HELPS YOU SELL

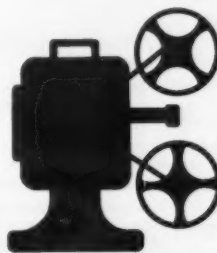


Mammoth A-board detours traffic your way, helps you take full advantage of the famous

Raybestos

**7 POINT
BRAKE
CHECK**
(includes adjustment)

1. Pull front wheels, inspect linings
2. Check brake drums
3. Inspect front wheel bearings
4. Clean brake assembly
5. Check hydraulic system
6. Adjust brakes or recommend reline
7. Road test brakes



Raybestos Brake Service Clinics, featuring color films on trouble shooting brake work, train your mechanics. Raybestos jobbers—there's sure to be one near you—sponsor clinics regularly.

New Products Continued from page 76

plications. A new stock numbering system, which keys each part to the original manufacturer's line, is one of the new line's features. The Blue Streak small engine parts previously in Standard's line have been incorporated into this new one.

For more information, refer to New Product Information Post Card that faces inside back cover.

326. Posture Seat

McCarty's Sacro-Ease Division:

A new sports car model posture seat, known as Sacro-Ease, has been announced. Designed for sports car bucket seats or simulated bucket-type seats less than 19 inches wide, the new seat with back rest insures proper sitting posture by providing cushioned and firm support, the manufac-

turer claims. It is adjustable to individual needs for proper sup-



port of both back and hips. A curved projection at the rear of the latex-sleeved, tool steel seat frame keeps it centered in the seat. It offers no interference with the use of seat belts.

For more information, refer to New Product Information Post Card that faces inside back cover.

now . . . for the first time, a sensational improvement in breaker point assemblies!

(left above) NOTE THE VAST CONTACT AREA OF JORIN TRIPLE CONTACTS, ASSURING FULL CURRENT FLOW. IN CONTRAST TO SMALL CONTACT AREA OF ORDINARY POINTS (right above) WITH RESTRICTED CURRENT FLOW AND RESULTING COIL STARVATION.

LARGEST CONTACT AREA & LONGEST LIFE OF ANY POINTS in the industry!

LARGEST VENTILATION AREA OF ANY POINTS in the industry!

FASTEST HIGH TENSION CURRENT OF ANY POINTS in the industry!

proven sensational in fleet and individual tests over the past three years!

the new key to **MAXIMUM IGNITION SYSTEM EFFICIENCY . . .**

JORIN TRIPLE CONTACT DISTRIBUTOR POINT SET

A PRE-ASSEMBLED SET for easy installation!

U. S. and CANADIAN PATENTS PENDING

No other points have the new, unique, fully tested and proven better Jorin action! Jorin Points are self-aligning, self-cleaning, self-ventilating! Round contact surfaces slide together smoothly, prevent point bounce—no bounce no burn! Five times longer point life is not unusual . . . saves money, time and delivers maximum ignition system efficiency! Write for full data—send dollar bill for trial set (state car make, model).

JORIN SPECIALTY COMPANY

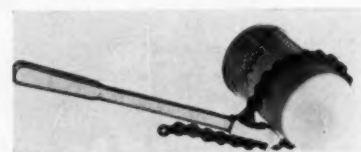
915 Old Town Road • Clearfield, Penna.

327. Driving Guides

King Electric Equipment Company: Two new dash-mounted driving-guide accessories have been announced. The model 424 Battery Condition Indicator is said to provide a continuous indication of generator and regulator operating efficiency, and to register battery condition each time the vehicle engine is started. The Model 414 Performance Gauge shows miles per gallon at all speeds and to, indicates the most economical driving range on a three-color dial.

For more information, refer to New Product Information Post Card that faces inside back cover.

328. Chain Wrench



Wix Corporation: An improved chain wrench is offered, which simplifies and speeds up the dismounting on "Spin-On" type filters. It is claimed that the Chain Wrench will save time and labor

(Continued on page 104)



Art Frost's new branch in Culver City, adjoining famed M-G-M Studios, features a "jewel box" showroom for one car and a cabana-type carport display area for 30-40 more.

Here's how Los Angeles De Soto dealer Art Frost keeps pace with the nation's fastest-growing area—

"We've opened a third branch for the growing De Soto market"

"De Soto sales are increasing with Los Angeles' mushrooming growth," says De Soto dealer M. A. (Art) Frost. "In addition to our Glendale and La Brea branches, we've opened a third new branch in Culver City for the growing De Soto market."

De Soto Appeals to Younger People

"But population growth is just one factor explaining higher De Soto volume," he feels. "The basic reason is that L.A.'s a young-minded town, De Soto has the styling and performance young people want."

Wide Price Range Helps Sign 'Em Up

"Even more important, De Soto's a quality car

younger people can afford. It's the best car on the market in its price class, and its wide price range lets us get about any new-car prospect's name on the dotted line. And De Soto quality keeps them sold, so repeat business is a big factor with us.

"De Soto's a young-minded car—and so are the people and policies behind it. I think De Soto's new advertising is the freshest in the business."

More Expansion With De Soto

"We've expanded greatly since we took on our De Soto franchise 25 years ago," Mr. Frost concludes, "but I'd say there's even more expansion ahead."

IT PAYS TO BE A

DE SOTO DEALER!

WALKER

PRECISION TUNED

SILENCERS

**BEAT
INSIDE
RUST...**

INSIDE
...where it starts

Unretouched photo of
Walker pipe
rust proofed with
"Corrosite 810"
after severe 18 hour
salt spray test



◀ **..AND** ALL WALKER PIPES ARE PROTECTED AGAINST
NORMAL STORAGE RUST WITH EXCLUSIVE "CORROSITE 810"

up to 3 times longer muffler life!

Mufflers don't wear out . . . *they rust out from the inside*. Inside rust from corrosive acid condensate is the No. 1 cause of premature muffler failure. So Walker puts extra rust protection where it counts most—on the inside, where rust starts.

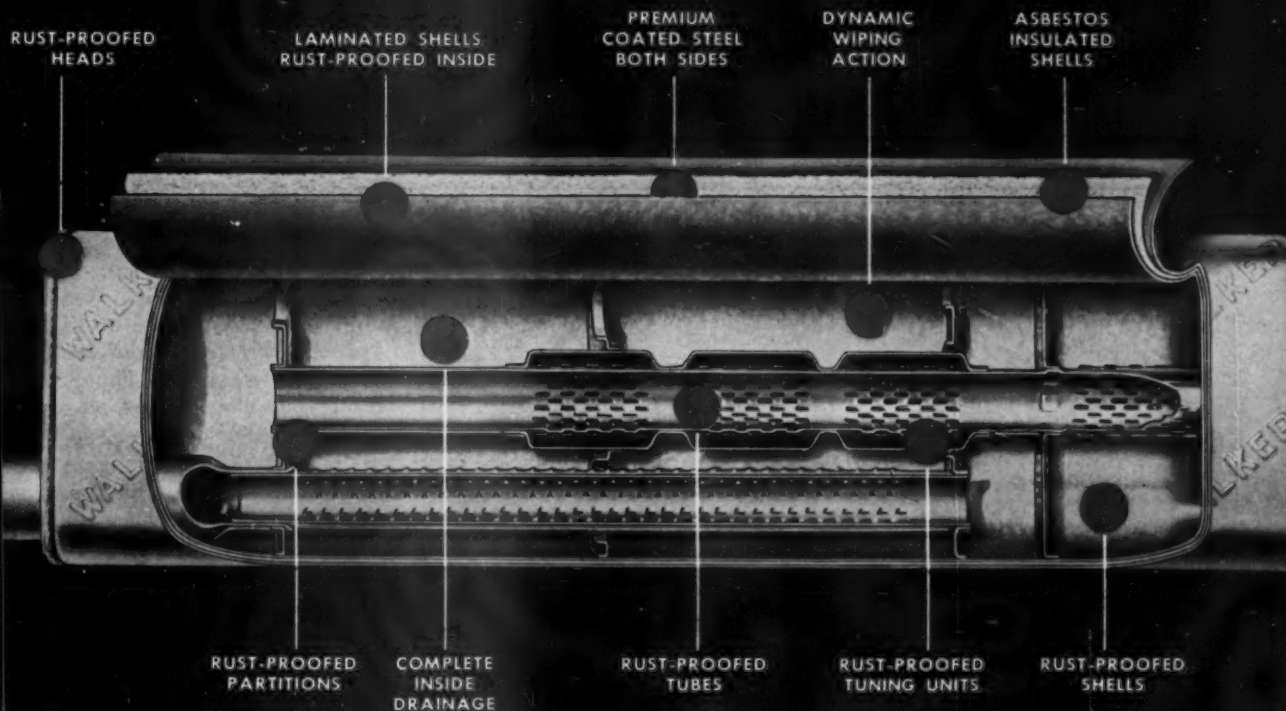
Under the most critical of all rust-out conditions . . . normal city driving with a dual exhaust system . . . Walker "Precision Tuned" Silencers provide more complete protection against *inside rust* than any other replacement mufflers.

- **PREMIUM RUST RESISTANT STEEL**—inside on all shells, heads, partitions, and tubes as needed.
- **COMPLETE INSIDE DRAINAGE**—acoustically controlled —prevents collection of moisture and rust-producing acids.
- **ADVANCED VOLUME PASSAGE**—creates a "Dynamic Wiping Action" that picks up moisture . . . carries it through the exit tube.
- **ASBESTOS INSULATED SHELLS**—keep inside temperature above the evaporation point—removing a primary cause of inside rust.

DON'T BE FOOLED . . . by how heavy a muffler is . . . or what it looks like on the outside. Walker Silencers do have heavier shells (.051). But it's what's *inside that really counts*. Walker "Precision Tuned" Silencers . . . *rust proofed from the inside out* . . . have been proven by actual on-the-car tests to give up to 300% longer life. Change to Walker "Precision Tuned" Silencers and beat inside rust—where it starts.

WALKER MARKETING CORPORATION, Racine, Wisconsin.
A subsidiary of Walker Manufacturing Company of Wisconsin.

Rust protection on the inside where it counts!



risers and heat control valves. They can be the cause of excessive heat to the manifold, which can cause percolation. The cooling system should be in proper working order also. Use the correct type thermostat for the type car and season. Having checked all these items, any percolating problems should disappear.

The Problem of Flooding

Flooding can occur at any time, winter or summer, wet or dry weather. When it happens, gasoline can be seen flowing out of the carburetor top and over the manifold. This gasoline also flows out of the main nozzle into the engine manifold. Raw gas

then enters the combustion chamber.

If the engine is operating when this condition occurs, it will lope, stumble and stall, or have a very uneven idle. The degree of leakage or flooding will determine whether the engine stalls or continues to run roughly. This roughness cannot be compensated for by adjustment of the idle mixture screws.

Flooding of this type is generally caused by either dirt under the needle valve and seat, improper float adjustment or a loaded float. The most common type of trouble is caused by foreign matter on the needle and seat. Generally, an inspection of the seat will disclose whether a poor seat or seal between the needle and seat is the cause of the problem.

The valve assembly can be tested on the vacuum pump of a distributor tester, or by holding in your mouth. Most needle valves will hold 10 inches of Hg. and drop free of the seat, when vacuum is released. If the seating tests okay, then check for presence of foreign matter.

Given a flooding condition that comes and goes, it's a good estimate that foreign matter is the answer. Examine the contents of the fuel bowl. If a red dust is evident, then iron oxide is the villain. To double check this, take a magnet, and roll it around the bowl bottom. If it's iron oxide, it will cling to the magnet. This type of material is so fine that it can pass through an average type filter. It can keep the needle valve off its seat just enough to throw your idle mixture off.

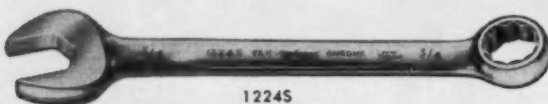
One effective way to prevent this is by the use of a magnet in the filtration system. This should reduce considerably the amount of iron oxide that's allowed to pass. A good filter will normally take care of the normal dirt particles.

(Continued on page 88)



Herbrand COMPLETES THE "HEX-FIT" COMBINATION WRENCH FAMILY WITH THE NEW SHORT SERIES!

1/3 shorter than the Hex-Fit long series, these new shorties provide finger-tip control so necessary for greater profits on job-rate work where close quarters are a problem.



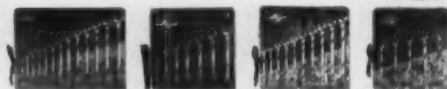
"HEX-FIT" WRENCHES PASS THE FEELER GAUGE TEST!

See and feel this new "Hex-Fit" short series and you'll agree they're the ultimate in wrench design. Like the recently introduced "Hex-Fit" long series, they have a rich, jewel-like hand-polished finish—compact, contour-shaped heads—6 and 12 point box ends. They are rapier-thin, perfectly balanced for better leverage and torque feel. "Hex-Fit" wrenches truly reflect Herbrand's 78 years of leadership in producing job-matched tools for the professional mechanic. Ask your jobber today!

ORDINARY WRENCH
Inaccurate milling or broaching rounds off corners of nuts—wrench slips—knuckles get busted.



"HEX-FIT" WRENCH
Precision milling of "Hex-Fit" wrenches, provides an accurate, close fit. Results: No slip, no burr, no busted knuckles.



WRITE FOR LITERATURE DESCRIBING 9 DIFFERENT "HEX-FIT" SETS!

Herbrand Tools HERBRAND DIVISION
THE BINGHAM-HERBRAND CORP., FREMONT, OHIO

Circle 362 on Inquiry Card, facing 3rd Cover

Now!

**New Du Pont
pricing on
Zerex® and Zerone®
helps you make money
at both ends!**



Now you can boost your sales of Du Pont "Zerex" and "Zerone" anti-freeze two ways: *installed or carried out!*

The new "carry-out" prices of \$2.39 for "Zerex" and \$1.25 for "Zerone" help you compete on *price* with the cash-and-carry outlets that captured 49% of total anti-freeze sales last season.* And you have the extra sales appeal of the Du Pont reputation for quality.

You can increase your *installation* business, too, by switching carry-out customers to service customers and charging for installation. Your Guaranteed Anti-freeze Protection Program will help you do it.

So get your order in now—you'll make greater anti-freeze profits at *both* ends with this new Du Pont pricing plan!

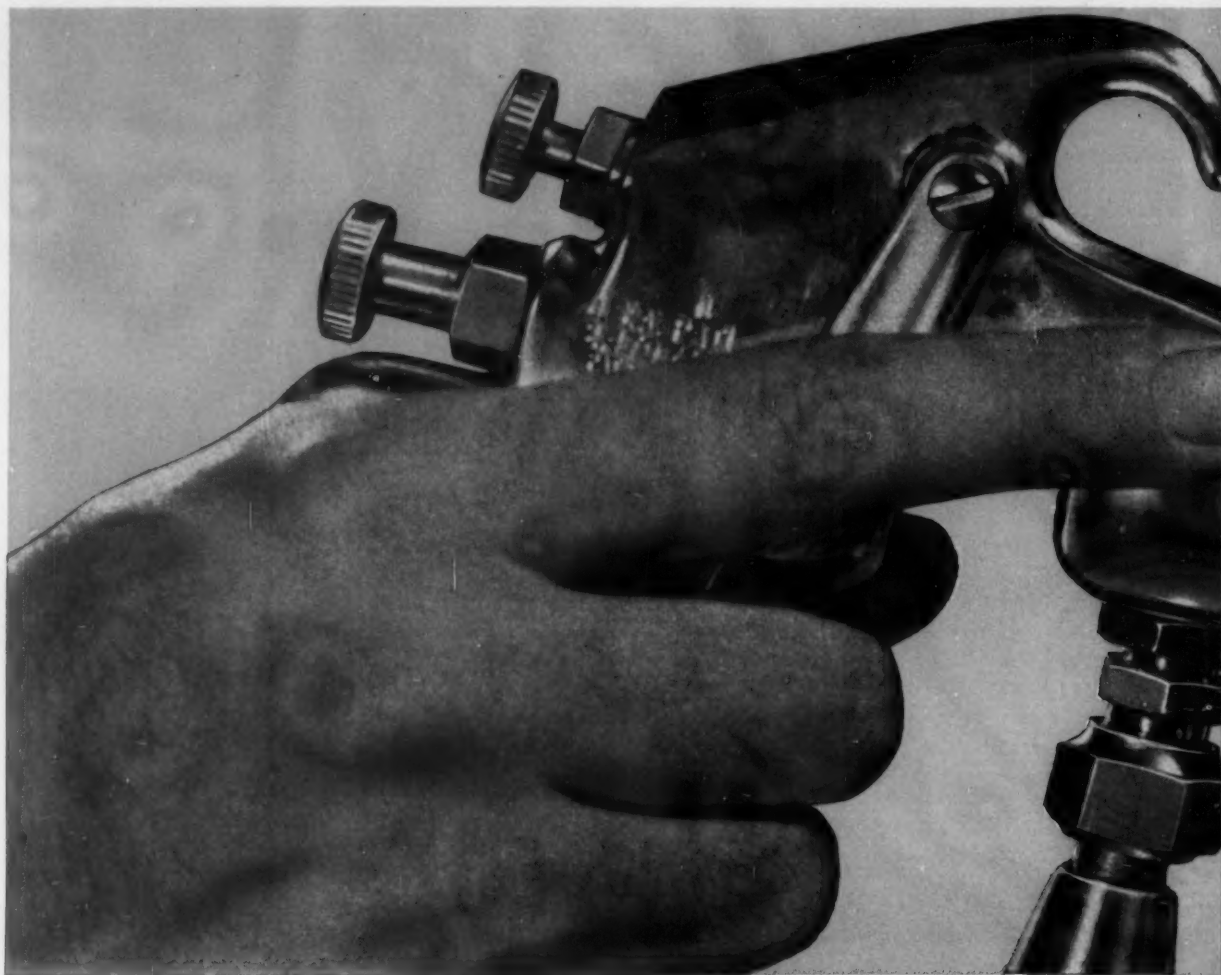
*Based on a 1958-59 survey conducted by National Family Opinion, Inc.

ZEREX **\$2³⁹** PER GALLON PLUS INSTALLATION
ZERONE **\$1²⁵** PER GALLON PLUS INSTALLATION

(Above are Fair Trade prices)



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY



GO GUNNING for that

**It's big...it's broad...
and you can handle
every one of these
profitable services
with modern DeVilbiss
spray equipment**



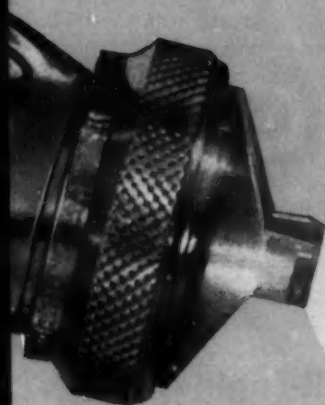
1 Enjoy big volume from spot, panel, and over-all paint jobs—Build a reputation for quality . . . profit from DeVilbiss speed. There's new specialized DeVilbiss equipment to handle all the modern materials—take the flared fins and reverse curves of late-model cars right in stride.



2 There's profit in touching up nicks, scratches, and thin edges—Fix the *little* flaws . . . a must for used car reconditioning. DeVilbiss touch-up outfit does a slick, quick job on detail work and small spots, eliminates the need for most masking.



3 Don't overlook underbody coatings—There's good money here . . . if you spray, using DeVilbiss spray gun and efficient material pump for fast application, trouble-free service.



**Spray jobs
mean more
profit opportunities**

appearance-reconditioning business



- 4 Profit from the extras**—It pays to be thorough. Clean and tint upholstery, renew trunk interiors, dress up convertible tops, repaint engines to give cars that “in-top-condition” look inside and out, from bumper to bumper. All are *spray* jobs.



- 5 Wax cars faster**—Offer this popular service at an attractive price . . . and clear a nice piece of profit. With a DeVilbiss spray waxing outfit, you can handle more jobs, easier, in less time.

Appearance-reconditioning can easily account for at least *one-third* of your service-department volume . . . furthermore, it's high profit service so it pays to keep up-to-date with spray equipment that handles all the modern materials and finishes. Call your DeVilbiss man today, and get the facts, firsthand, on the industry's most complete and up-to-date line of spray-painting equipment.

THE DEVILBISS COMPANY

Toledo 1, Ohio

Barrie, Ontario • London, England • São Paulo, Brazil

Branch Offices in Principal Cities

FOR BETTER SERVICE, BUY

DEVILBISS



As for float or fuel level adjustments, always follow the specifications set by the manufacturer and you won't go wrong. A loaded float must be replaced; it should never be repaired. Any additional soldering done will always add weight to the float and destroy its stability.

Basically, be sure that the engine is operating at the correct temperature, that the air delivered to the carburetor is clean and cool, and the carburetor is supplied with cool clean gasoline. When this is done, along with all settings at factory specifications, you will have correctly tuned the fuel system.

Continued from page 41

The "special price" was obtained because the panels are of odd size—3 x 8', instead of the ordinary 4 x 8' panels. Two-by-fours are framed to accommodate the 3 x 8' panels. And 1 x 2's are used at three-foot intervals, horizontally, to strengthen the wall.

Ordinary commercial lighting units, three-tube fluorescents, are angled at the union of the wall with the ceiling. At the rear of the room, an exhaust fan is mounted after punching a hole in a block wall. The paint fumes are carried roof-wards by duct work outside the building.

Continued from page 39

the turnover in service volume each year, once you are established in business!

NOW! what about the very important and profitable side of this picture? The service picture in other words . . .

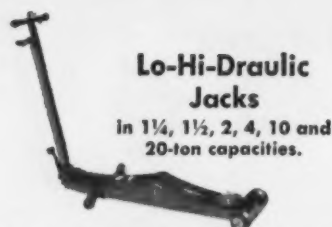
The Service picture is good. Yet there is a paradox here very similar to that in the automotive service industry. We are producing more complicated and greater numbers of engines and equipment, than we have service outlets or trained manpower to cope with them. Our population is gaining yearly; it should reach approximately 190 million in the next five years. Like the automotive service industry, the number of service outlets and trained mechanics is decreasing in relation to production and population increase. They are not falling by the wayside, but their number is not increasing in proportion to the demand for their service.

Who will service these new power units?

How can I get into this business?

(Continued on page 92)

CHOOSE FROM THIS COMPLETE LINE OF WEAVER JACKS



**Lo-Hi-Draulic
Jacks**

In 1½, 1½, 2, 4, 10 and
20-ton capacities.



**Hydraulic
Bumper Jack**

offers easy foot
operation.



**Hydraulic Hand
Jacks**

in models of
1½, 3, 5, 8, 12, and
20-tons capacity.



**Mechanical Bumper
Jacks**

WA-26 for passenger cars.
WA-27 for service
station use.



**Air-Operated
Bumper Jack**

lifts entire
end of car for
faster service



Wheel Dolly

for handling
large duals.


Ask your Weaver Jobber for details

WEAVER [®] **SERVICE SHOP EQUIPMENT**
WEAVER MANUFACTURING CO., SPRINGFIELD, ILL., U.S.A.
Division of Detroit Harvester Company

Complete Weaver line includes: Twin Post Lifts . . . Triple Post Lifts . . . Single Post Roll-on,
Free-Wheel and Frame Type Lifts . . . Unit Lifts . . . Bumper Jacks . . . Car Washers . . . Wheel
Alignment Equipment . . . Headlight Testers . . . Brake Testers . . . Wheel Balancing Equipment
. . . Jacks . . . Wheel Dollies . . . and Air Compressors.

Circle 364 on Inquiry Card, facing 3rd Cover

ONLY ARMSTRONG GIVES YOU SAFETY DISC GRIP TO SELL!



Patented "Ounce of Prevention"
Safety Discs keep the tread
ribs apart, prevent deadly
skids as no other tires can.

BEST KNOWN, MOST WANTED SAFETY FEATURE IN TIRES TODAY!

Selling is vastly easier when you have an important, wanted exclusive to offer. Millions of tire customers learn about skid-stopping, life-saving "Ounce of Prevention" Safety Discs through page ads in LIFE, POST, LOOK and "spots" on television. Armstrong's fist gripping the road is the best known advertising symbol in the industry. Fatten your sales and profits—get the Armstrong story.

Available in NYLON or
new TYREX viscose tire cord



ARMSTRONG RUBBER COMPANY • HOME OFFICE, WEST HAVEN, CONNECTICUT

Check—and you'll be amazed you can add by dispensing



A **WAGNER FLUID-BAL** will prove to be a great aid in helping you bleed brake systems and dispense brake fluid.

If a check of the old brake fluid in the master cylinder of a vehicle discloses that the fluid is badly discolored or dirty—the system should be drained, flushed, and then refilled with fresh Wagner Lockheed Brake Fluid.

For best results—use a **WAGNER FLUID-BAL** (illustrated at left). With it, bleeding and refilling the brake system becomes a one-man operation. Even though a car is raised off the floor, the mechanic does not have to climb in and out of the hoisted car, and he doesn't need a helper.

Flushing out a brake system will help avoid the kind of trouble that often causes clogging of parts, sticking valves, leaking and scored cylinders and faulty brake action.



NEW HANDY DISPENSER (of type illustrated at left) makes it a fast and easy operation for any mechanic to pump fluid directly from a one-gallon can of Wagner Lockheed Brake Fluid into any master cylinder.

This Dispenser is handy to use anywhere. One pull on handle and release, and you have finger-tip control in adding fluid.

SPECIAL OFFER (Subject to change or withdrawal without notice) enables you to get this Dispenser—at a greatly reduced cost to you—when you purchase 5 one-gallon cans of Wagner Heavy Duty Brake Fluid... Ask your supplier for details.

Wagner® Lockheed **HEAVY DUTY BRAKE FLUIDS** have all these features and advantages:

- Surpass SAE Specifications.
- Conform to Federal Specifications.
- Tests prove them to be the best fluids in their price ranges.
- Function over wide range of temperature conditions... Chemically balanced formula has the correct proportion of all ingredients required to make Wagner Lockheed an all-season fluid that maintains high operating temperature characteristics, yet functions in sub-zero temperatures.
- Lubricant characteristics provide proper lubrication to all parts of the brake system.
- Have exactly enough moisture-absorber so that metal parts of brake system will not rust or corrode.
- Do not cause rubber cups or hose to swell.
- Form no gummy residue.
- Do not evaporate rapidly.
- Packaged in 12 oz., quart, gallon, 5, 30 and 54 gallon containers.
- Produced in Wagner's own factory—the largest and most modern plant in the world devoted to the production of brake fluid.

LOCKHEED BRAKE PARTS, FLUID, BRAKE LINING and LINED BRAKE SHOES • AIR HORNS • AIR BRAKES • TACHOGRAPHS

at all the profitable volume brake fluid...

Every time you raise the hood of a car—take a look at the brake fluid in the master cylinder. You'll find many cars either need additional fluid or need to have brake system drained, flushed and refilled.

You... and your customer... gain when you supply Wagner Lockheed Brake Fluid. You can use this top-quality heavy duty fluid and have complete confidence in obtaining satisfactory results... Your reputation will be safe—and the customers you serve will be safer whenever lives rely upon brakes functioning properly, under all operating conditions.

FOR DETAILS on the complete Wagner Lockheed line of Brake Fluid, Brake Parts, Power Brake Repair Kits, Brake Lining and Lined Shoes—contact your nearest supplier of these top-quality products, or mail coupon for **FREE Catalog AU-1**.



Wagner Electric Corporation

6498 PLYMOUTH AVENUE, ST. LOUIS 14, MO., U.S.A.
(Branches in principal cities in U.S. and in Canada)

Please send us a free copy of Catalog AU-1 on your complete line of brake service products.

NAME _____

FIRM NAME _____

ADDRESS _____

CITY & STATE _____

Small Engines Continued from page 88

How can I learn to service them?

Will I be able to make a good profit?

Who will service these new power units? There are many possibilities for service outlets on these engines. One factor for consideration is: Are you inter-

ested in a new business? Can you dove-tail these engines into your present service operation?

There is adequate opportunity for a young man mechanically inclined. He can establish himself in this business with a minimum of capital. First, examine your location. Perhaps it's along the water which would indicate a po-

tential for inboard and outboard engine service. A location inland presents opportunity for the service on lawnmowers, grain augers, water pumps, tillers, air compressors, light and power plants. Large metropolitan areas have a potential of industrial firms and public utilities (who use these power plants in large numbers).

Frozen food lockers, home freezers, poultry raisers, any number of people and firms would suffer heavy losses if it were not for the use of these small engines to power emergency electric power units. These are only a few of your potential service customers.

Your space requirements would be simple. A space approximately 200 to 300 sq. ft. or about the area required to store a conventional automobile. Your investment in dollars could be anywhere from \$200 to \$1000 or more. It depends on the type of equipment and amount of parts you wish to start with.

Should you now have a service operation of some type in existence, your investment would be small. Just the decision to use unproductive space in your present shop and the initial investment in fast moving parts would establish you in the small engine repair business. All of your present shop tools and equipment could be efficiently used and supplemented by some special small engine tools and gauges.

How Can I Get Into This Business?

First try to decide what type of engines and equipment you desire to handle. Keep in mind that to start off, you would be wiser in handling one or two lines. When you and your personnel become familiar with these new products and engines, then you can decide to expand into more complex equipment lines.

Investigate the numbers and
(Continued on page 102)

"\$18,000
my first 9 months
SERVICING
RADIATORS!"

— Harvey C. Jones Co., Reseda, Calif.



Harvey Jones says: "The radiator business was new to me until I opened my shop. During the first 9 months I grossed \$18,000! I feel this was due to the excellence of my Inland equipment—plus the thorough instruction and sales aids received at your school!"

Hank Konter, Newcastle, Wyo., grossed \$7,108 the first year!

Poteau Motors, Poteau, Okla., made \$1,500 in 3 months!

Douthit-Carroll-San Chez Co., Memphis, Tenn., averages \$300 a week!

Sidney Glass & Rad. Shop, Sidney, Mont., grossed \$10,784 in a year!

WANT EXTRA PROFITS? There's a real radiator-servicing opportunity in your area right now—growing every month. Every auto-truck-tractor owner is a prospect. Modern cooling-system pressures now are so great that radiators require more frequent servicing.

GET THE FACTS from Inland, world's largest radiator servicing equipment mfr. Inland offers the industry's newest and finest equipment. Inland's purchase plan makes the equipment easy to own, it soon pays for itself. Inland trains you or your man quickly, provides you with proved merchandising and selling aids. For complete information, mail the coupon.

MAIL TODAY

New free 48-page book, "Blueprint for Profits," tells about many making an EXTRA \$8,000 to \$15,000 a year servicing radiators. Complete with illustrations, descriptions and prices of required equipment. Popular "Pays-For-Itself" purchase plan. Invest a minute to mail the coupon—the rewards can be amazing! Send today!

INLAND MFG. CO., 1108 Jackson St.

Dept. MA-8, Omaha 2, Nebr.

"SOLD EXCLUSIVELY BY MAIL"

INLAND MFG. CO., Dept. MA-8
1108 Jackson St., Omaha 2, Nebr.
Please send new free book, "Blueprint for Profits."

FIRM _____
(PLEASE PRINT)


ADDRESS _____

CITY _____ ZONE _____ STATE _____

BY _____ TITLE _____

If dealer, make of car sold _____

Are you now operating a radiator dept.? ☐ Yes ☐ No



This is the only Impact Wrench

that has the GUTS to give you
a free year's service certificate!

No other heavy-duty impact wrench can match the power, speed and maintenance-free construction of a Black & Decker. B&D backs this statement with a free service certificate good for one full year.

From drive spindle to reversing ring, every part has been designed to eliminate breakdown problems. Features like B&D's specially selected spindle bearing, *life-tested* impact mechanism spring (compressed in tests over 100 million times); precision machined anvil and impactor give you a lightweight, heavy-duty impact wrench packed with power and speed.

Wherever a bolt must be spun—in motor, drive-line or body work, wheel changes, and general maintenance

—a Black & Decker Impact Wrench does the job faster, with less fatigue, for more profit. Remember, *only* Black & Decker backs tool performance with a free year's service certificate! Put one to work for . . .

—as little as \$2.07 a week.

No interest or carrying charges.

LEADING JOBBERS EVERYWHERE SELL

Black & Decker®

QUALITY ELECTRIC TOOLS

Look Under
TOOLS-ELECTRIC
For Sales or Service



Circle 366 on Inquiry Card, facing 3rd Cover

THE BLACK & DECKER MFG. CO., Dept. 5108
Towson 4, Maryland (In Canada: Brockville, Ont.)
Let me know more about B&D Impact Wrenches—
FREE service certificate.

Name.....Title.....

Company.....

Address.....

City.....Zone.....State.....



☐ Belt
Sanders



☐ Polishers



☐ Valve
Refacers



☐ Drills

Why spark plugs at least every

Regular plug replacement gives big benefits in better performance and economy. Here's why old plugs need replacing—and why new Champions make such a difference...

WHAT TAKES THE "SPARK" OUT OF SPARK PLUGS?

Spark plugs begin wasting gas, and losing power and performance, when they start to misfire. A plug *fires* when a spark jumps the gap between the electrodes, igniting the fuel/air mixture. A plug *misfires* when a spark cannot jump the gap.

One reason why a spark cannot jump a gap is that more voltage may be needed than is available from the ignition system.

A new plug, with proper gap setting, needs about 5,000-8,000 volts to fire. After 10,000 miles of driving the gap is about .010" larger—and voltage requirements are about double. And every 1,000 miles of driving after this means even more voltage is needed.

And this is only for normal driving. Running at full throttle *increases* voltage demands 30-40%. Yet high speed driving *reduces* the amount of voltage available

because the points don't remain closed long enough to permit full coil saturation.

Even higher voltage requirements—as much as 100% above normal—may occur when the accelerator is quickly floored, as for fast passing on the highway. This is where misfiring is often first noticed, when the car fails to respond properly.

When plugs misfire noticeably under heavy loads, they often have *unnoticed* misfiring in normal driving. This is one important reason for replacing at 10,000 miles, even though the old plugs seem to work all right at city driving speeds.

EFFECT OF FOULING DEPOSITS

A spark sometimes does not jump a gap because of fouling deposits. These deposits often build up when engines run at relatively low speeds and temperatures, as in heavy traffic or on short trips to the local shopping center.

Because electricity always takes the path of least resistance to ground, these deposits may let it drain away without having to jump the gap. Thus, no spark occurs and again there is misfiring and loss of gas and power.

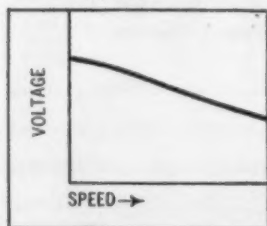
WHAT ABOUT CLEANING AND GAPPING PLUGS?

Plugs should be cleaned and gapped after 3,000-4,000 miles of service, especially if the car is driven under conditions that cause fast build-up of fouling deposits.

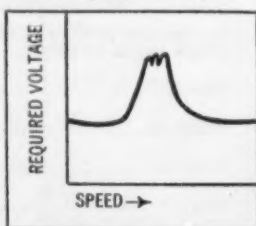
If plugs have gone 8,000 or 9,000 miles without cleaning, and have a heavy deposit build-up, it is almost impossible to completely remove all deposits after this much build-up.

Regapping a plug reduces the voltage needed to fire it. But even with careful filing of the electrodes it is virtually impossible to bring a plug back to "brand new" condition. This is because clean, sharp edges on

Voltage available drops as speed increases.



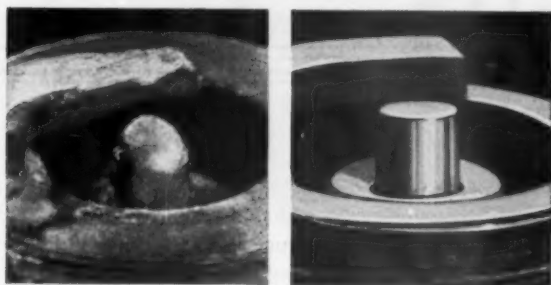
Sudden acceleration raises voltage needs sharply.



CHAMPION SPARK PLUG

should be replaced 10,000 miles

the electrodes considerably reduce the voltage needed for sparking, and it is extremely difficult to file electrodes back to factory-new sharpness after several thousand miles of wear.



Old plug (left) has rough, uneven electrode surfaces.
New plug (right) has sharp, clean electrode edges.

Because of these facts, after about 10,000 miles of driving it just isn't economical for a customer to pay for having old plugs cleaned and regapped again. Those 10,000-mile plugs have done their duty. Replace them with new Champions.

REPLACE IN COMPLETE SETS

When old plugs are replaced, the entire set should be replaced. Installing only two or three new plugs means that in another thousand miles of driving or so, other-plugs will probably need replacement. And with this "bit by bit" replacement, a motorist never gets the full advantage of new-plug performance and economy. A chain is no stronger than its weakest link—and an engine is no "newer" than its oldest plug.

REPLACE AT LEAST EVERY 10,000 MILES

These are the basic reasons why plugs should be replaced at least every 10,000 miles. And always replace with full-firing, 5-rib Champions. Remember, wherever power is vital—the experts choose *Champion* spark plugs.

COMPANY • TOLEDO 1, OHIO

NEW SPARK PLUGS GIVE ...

GREATER ECONOMY—A full-firing set of new Champions delivers all the power from every drop of fuel. Regular 10,000-mile plug replacement generally pays for itself in gas savings, while giving other benefits as a bonus.

QUICKER STARTING—Much of a car's voltage is needed to crank the starting motor. There may not always be enough left to spark old plugs with high voltage requirements. And the colder the electrodes, the more extra voltage is needed. This is why a car with old plugs often won't start in cold weather.

MORE POWER—The lower voltage demands of new plugs mean they fire every time. Tests show the average power gain on replacing plugs at 10,000 miles is 24% more road horsepower.

FASTER ACCELERATION—The correct gaps and sharp, clean electrode edges of new Champions reduce voltage needs to a minimum, so that even under peak demands of rapid acceleration, there is no power-wasting misfire.

SAFER PASSING—Because full-firing new Champions permit maximum acceleration, highway passing is made safer.

LESS ENGINE WEAR—Misfiring plugs allow unburned raw gas to dilute protective engine oil. New Champion spark plugs in an engine mean minimum wear.

CHAMPION
SPARK PLUGS



Evaporator Continued from page 35

conditioning system is of course to cool, and dehumidify the air.

Nature's law of temperature exchange indicates that heat will flow towards a cool object; never from the cool one to the hot one. As an example: If a red-hot iron rod were submerged in a bucket of ice cold water, the heat from the rod would travel toward the

cold water; not the cold of the water to the hot rod.

The rate of this heat transfer is in direct relation to the difference in the temperature of the two objects. Suppose that the water used in the bucket were boiling instead of ice cold. The rate of heat transfer would be reduced considerably.

Heat is a form of energy. When it is added or removed from any object it is generally indicated by a change on a thermometer. There are two types of heat generally mentioned, latent and sensible.

Just briefly, latent heat is heat added or removed from an object without changing its temperature. Sensible heat, however, does register on the thermometer. Latent heat is the number of BTU's added or removed from an object in order to raise or lower its temperature. An example is that of water to ice or the reverse.

If a thermometer were placed in an ice cube it would read 32 F. It would continue to 32 F., even when it changed to water. Thus we would have ice and water both at 32 F. The difference would be the number of BTU's added or removed to change the state of the substance.

It takes the transfer of 144 BTU's per pound of water or ice to change its state, without a change in thermometer reading. When water is placed on a stove to boil, heat is applied to it. The water reaches the boiling point at 212 F., and continues to boil at the same temperature. The heat that is absorbed by the water (still at 212 F.) is used to change the state of matter from a liquid to a gas or vapor.

When a state of matter change takes place, energy or heat must be added to or removed in order for the change to take place. Our evaporator is the device by which these changes in the state of matter and the transfer of heat take place.

Evaporator's Construction

The evaporator core consists of a series of plates. When joined together, these plates form the refrigerant tubes plus the top and bottom tanks. This design provides that the refrigerant travels a shorter distance with little or no pressure drop be-

(Continued on page 104)

TORQUE WRENCHES

Why service any product with a torque wrench that is not up to manufacturer's standards?

Survey indicates this flexible beam type of torque wrench is used by over 85% of the Automotive Manufacturers and the one most recommended for service work.

Look for U. S. Patent Numbers:

D-112,888 2,283,707 2,385,591

and this trade mark



... They are your assurance of high quality, long life and guaranteed permanent accuracy.

Free...

Engine torque specification and application tips on: Automotive • Truck • Tractor • Marine • Misc. Write "Torque Wrench" Dept. 615 Addison, Illinois

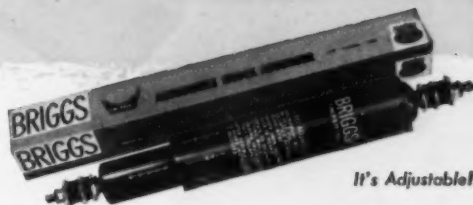


Quality Tool Suppliers Handle These Flexible Beam Torque Wrenches

Circle 368 on Inquiry Card, facing 3rd Cover



**"EASIEST WAY
I KNOW
TO MAKE
15 BUCKS
AN HOUR!"**



It's Adjustable!

"My NAPA Jobber put me wise to the *big market* for shock absorbers and the *big profit* on Briggs. Now, every time I put a car on the lift, I make doubly sure to *check the shock absorbers*, because half the cars on the road need their worn-out shocks replaced. All I do is check 'em, show 'em and sell 'em. And the installation is a cinch, honest. I can whiz four off and four on in an hour—whistlin', not cussin', while I'm workin'. Then there's a hefty 15 bucks to make me smile down to the bank and back."

BRIGGS BUILDS SHOCKS FOR EVERY CAR TO HELP YOU CLOSE EVERY SALE!

Your NAPA Jobber will show you the talking points on the Imperial (adjustable); Standard (regular duty); and Brigadier (heavy duty) . . . and the Briggs sales helps: streamers, how-to-sell booklet, enclosure, and NAPA Parade of Parts advertising in the Saturday Evening Post.

Speed up shock absorber replacement with the BRIGGS NUT-CRACKER

Nuts frozen by rust and corrosion come off in seconds. Saves time and work and helps you make more money faster. Available from your NAPA Jobber . . . a good man to know!



BRIGGS

Join the Parade of Profits
... cash in on the
NAPA Parade of Parts in



SHOCK ABSORBERS

The Briggs Shock Absorber Co., Cleveland 15, Ohio



SMALL
CARS



LONG
CARS



STANDARD
CARS

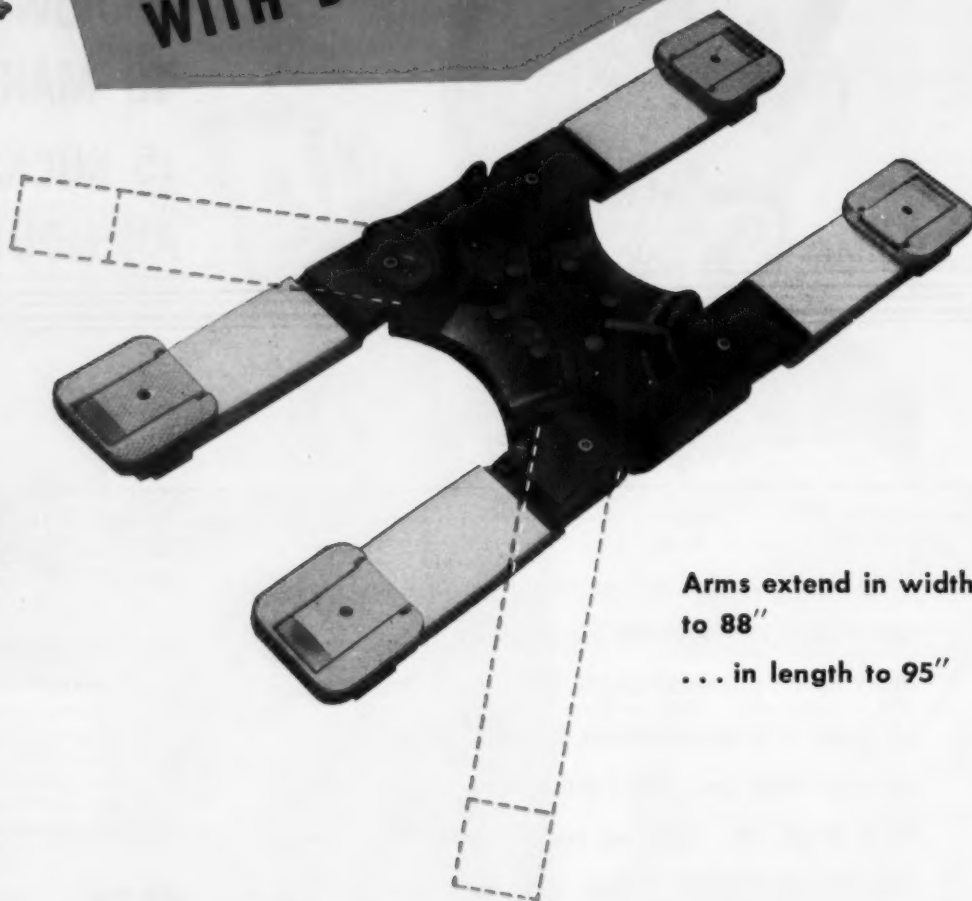


LIGHT
TRUCKS



SPORTS
CARS

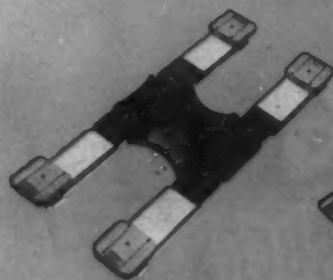
**NOW LIFT ANY MODEL...
FRAME...OR WIDTH
WITH DOUBLE SAFETY**



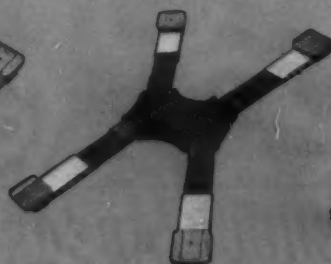
**Arms extend in width
to 88"**

... in length to 95"

FULL ADAPTABILITY TO EVERY VEHICLE...MODEL...CHASSIS



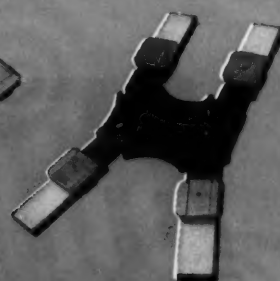
Swing Arms in Normal
"Drive Over" Position



Swing Arms in Extended-
Expanded Position



Swing Arms in Position
For "X" Frame Cars



Swing Arms in Minimum
Length Positions



UNIVERSAL

frame LIFT

Spot the car . . . position the arm . . . raise the lift.
As easy as one, two, three to lift any present or future passenger, sports, foreign car . . . or light truck.
The new Wayne UNIVERSAL Lift is adaptable to any frame type or body design.

No extra adapters needed. Everything is self-contained in extra sturdy arms which swing out to contact points on every car. Lift is narrow (27 1/4" wide) and low enough (4 1/4" high) to allow all cars to drive over it . . . wide enough to accommodate widest frames . . . four position pads fit all heights. Wheel stops make it possible to perfectly position every car.

Wayne UNIVERSAL is the positive contact, quick lift to speed lubrications, oil changes, changing mufflers, repair work and tire servicing. Every part is accessible . . . ample headroom . . . unobstructed view.

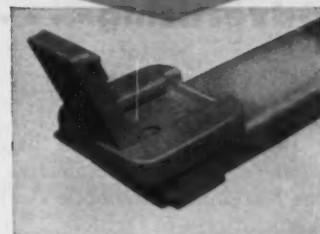
Write for booklet giving full specifications and details to The Wayne Pump Company, Division Symington Wayne Corp., Salisbury, Maryland or Wayne Pump Canada, Limited, Toronto, Ontario.

Compare the **UNIVERSAL**

COMPARATIVE DATA	LIFT WAYNE	LIFT "A"	LIFT "B"	LIFT "C"	LIFT "D"
BOLSTER DIMENSION AT C	14"	19 1/2"	12"	16"	12"
SUPERSTRUCTURE WIDTH	27 1/4"	32"	38"	35 3/4"	36"
RAIL-MIN. LENGTH OVERALL	60"	70"	75"	60"	69"
RAIL-CROSS SECTION	6" x 1 7/8"	8" x 1 5/8"	8" x 1 1/2"	6" x 1 1/2"	8" x 1 1/4"
PAD-MAX. EXTENDED LENGTH OVERALL	95"	86"	87"	87"	92"
PAD-MIN. RETRACTED LENGTH OVERALL	24 1/2"	34"	24 1/2"	46"	36"
PAD-MAX. EXTENDED WIDTH OVERALL	88"	76"	78"	84"	88"
PAD-SIZE	7 3/4" x 8"	7" x 8"	7 1/8" x 7 1/8"	7" x 7"	6" x 6"
PAD-MIN. HEIGHT ABOVE FLOOR	4 1/4"	4 5/8"	4 7/8"	4 3/8"	4 3/4"
PAD-MAX. ADDED HEIGHT ABOVE NORMAL POSITION	5 1/4"	4 7/8"	5 1/8"	5 3/8"	5 1/2"
PAD-NO. OF INTERMEDIATE POSITIONS	2	0	1	1	1

4 POSITION CONTACT PADS

. . . allows lifting of all height cars.



EXTRA SAFE ARMS

Swivel bolt and tongue-in-groove design safely holds arm in slot.



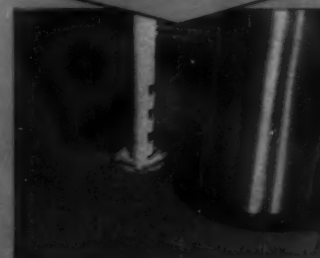
NO CRAWLING UNDER

. . . pads positioned with steel rod from side of car.



SIX POSITION SAFETY LEG

. . . allows operator to position lift at different levels.



automobile, truck, and their allied products . . .

In the past four years the Advertising Ethics Committee of the National Automobile Dealers Association—of which I have the privilege this year, for the second time, of serving as Chairman—may have over-emphasized the negative aspects of advertising. If so, this is a grievous fault. I can assure advertising officials and dealers alike that in our efforts to rid the industry of false, misleading and

deceptive advertising, we have not forgotten the power of advertising as a sales aid.

I am sure for advertising media officials, like yourselves, it is routine to ask, "What is the purpose of advertising?" . . . At the risk of over-simplifying the answer to the question, I would tell you simply that to an automobile dealer like myself advertising is no more than a pathway to sales.

We must never forget that people, *salesmen*, sell automo-

biles. You may disagree, but I do not believe any radio-TV commercial has, by itself, sold a car or truck.

Yet, we know that anything which will bring prospects to the salemen or which will make their job of selling the prospect easier is most welcomed by dealer and salesman alike.

Believability in advertising is its most important asset. Destroy your ability to serve as an effective medium for advertising . . .

I cannot warn you too strongly that the use of false and misleading and deceptive advertising

ONLY OFFERS YOU A CHOICE:

Packs maximum power and highest speed for big and little jobs alike. Light, easy to use, rugged—handles all but the biggest nuts and bolts on cars and trucks. Ideal for day-in, day-out garage use.



Built with power to spare and all the I-R features that mean faster, easier service and bigger service profits for you. Exclusive, precision torsion-bar torque control—at the turn of a knob—permits you to use this tool on precision torque jobs as well as practically any other automotive service job in your shop.



Call your I-R Jobber today for details, prices or a free demonstration of the most complete line of Air and Electric Impacttools for Automotive Service.

consequently renders advertising worthless. This, of course, affects, most adversely, the amount of money dealers will spend with you as an advertising media . . .

NADA has developed a "Statement of Advertising Principles" which makes it quite plain what constitutes undesirable advertising . . . NADA, working closely with the automobile manufacturers, developed these principles as a guide for dealers and advertising media alike. In the principles we see, "No advertisement should contain grotesque and exagger-

ated claims of alleged savings to the customer . . .

No advertisement should imply that because of a large sales volume a dealer is able to purchase new cars for less than another dealer selling the same make of car. The manufacturers are especially desirous of riding automobile advertising of such claims, as the practice suggested by such a claim is in violation of a Federal law. Each dealer pays exactly the same amount of money for the cars he sells as any other dealer and volume of sales has absolutely nothing to do with the amount a

dealer pays a manufacturer for a new car.

I shall not take the time to enumerate all of the phraseology which is contained in the "Statement of Advertising Principles." We hope that all advertising media people—especially the copywriters—will study these principles most carefully . . .

Blind Date—When you expect to meet a vision and she turns out to be a sight.

Summer is the time of the year when highway authorities close the regular roads and open up the detours.

✓	STANDARD
✓	HEAVY-DUTY
✓	TORQUE CONTROL
✓	AIR

4

1/2" SIZES



STANDARD
DUTY
ELECTRIC
IMPACTOOL
SIZE 4U-SD
1/2" DRIVE

Small and compact (only 6 lbs.), yet handles most automotive service jobs quickly and easily. A real multi-purpose workhorse that drills, taps, reams, saws, and cuts as well as it runs nuts. Hard to beat for power and efficiency at an amazingly low price.



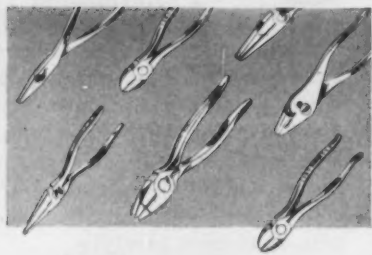
HEAVY-DUTY
AIR
IMPACTOOL
SIZE 403
1/2" DRIVE

The lightest, most powerful 1/2" drive automotive Impacttool on the market. Easy to handle in tight spots, with a built-in air regulator that permits control of power to handle from the smallest to the biggest nuts on cars and trucks.

18-935-1

Ingersoll-Rand

11 Broadway, New York 4, N. Y.



**skilled hands
reach for...**



• Skilled mechanics... thousands of them every year... reach for and buy Channellock pliers. Why? Ask them. They'll tell you they like the positive gripping power... the rugged strength... the precision balance... the all 'round handy "feel" of these quality pliers. And you will too!

CHAMPION DEPARTMENT TOOL COMPANY
MEADVILLE, PENNSYLVANIA

**ASK YOUR TOOL SUPPLIER
FOR *Genuine*
CHANNELLOCK PLIERS**

Calendar of Coming Events

Sept. 27-29—Southeastern Marketing Association; first convention, Biltmore Hotel, Atlanta.

Oct. 21-25—Second Annual Rod & Custom World's Fair Auto Show; Industrial Arts Bldg., W. Springfield, Mass.

Oct. 24-25—The International "500" Motor Sports Show; Veterans Memorial Auditorium, Des Moines, Iowa.

Oct. 28-30—Automotive Parts Rebuilders Association; convention and trade show, Hotel Roosevelt, New Orleans.

Nov. 2-5—The Automotive Warehouse Distributors Association, Inc., annual convention, Muehlebach Hotel, Kansas City, Missouri.

Nov. 14-21 Philadelphia Auto Show; Convention Hall, Phila., Pa.

Jan. 16-24—52nd Annual Chicago Automobile Show; international Amphitheatre, Chicago, Ill.

Jan. 30-Feb. 3—National Automobile Dealers Assn., Washington, D.C.

Feb. 10-13—Automotive Service Industries Assn. Show; Coliseum, New York City, N.Y.

Small Engines

Continued from page 92

types of equipment in your area. Decide which of these offer the greatest potential for both sales and service. Then write directly to the engine or equipment manufacturer. Explain in your letter, your desires and potentials, include photos of your establishment, or expected place of business.

The factory will then pass this information directly to their wholesale representative in your

area. The Central Distributor will then have a field sales and service engineer contact you. Between the two of you, arrangements can be made to complete your new business transaction.

(Part two of this article will go deeper into the Profit Picture of Small Engine Servicing. It will also explain techniques of acquiring full servicing knowledge.)

Grey-Rock Offers Special Race Film

Grey-Rock Division, Raybestos-Manhattan, Inc., is currently offering to "service clubs" a motion picture featuring the 9th Annual "Southern 500" NASCAR race at Darlington, S.C.

The "Southern 500" film was produced under the sanction and supervision of NASCAR—National Association for Stock Car Racing. It is presented as a public service by Grey-Rock. The film is available on a "first come—first served" basis reports Grey-Rock. It is free to all club, social and civic groups on request. Write to Grey-Rock Film Library, Distribution Dynamics, 405 Park Ave., New York 22, N.Y.

Mother: Don't you think it's time we took Junior to the zoo?

Father: No. If they want him, let them come get him.



**Buy
Bonds**

ALL METAL PARTS LOVE IT!



**PERMATEX
COLD PARTS
CLEANER
IN 6 GALLON
SIZE**

...MADE FOR THE PROFESSIONAL!

Just dip handy basket with parts—parts come out clean to bare metal. Unique detergent action disperses soil. Fast, safe, easy! Won't harm metals. Available in other convenient sizes.

**SEE MORE PERMATEX
PRODUCTS FEATURED ON PAGE THREE**






a
profitable
spot
for you
to be in



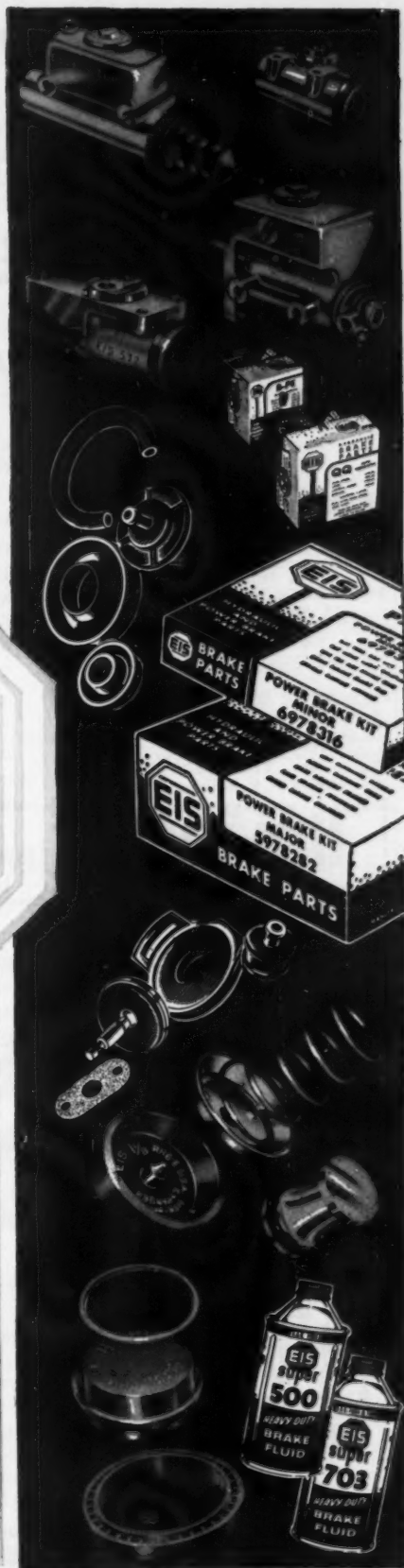
There's **MORE** room for profits
when you stock and sell
— the Engineered Brake
Parts Line that's now more
complete than ever!



Put yourself on the spot — the  spot!
It pays off handsomely and you'll
find yourself in good company, too!

Ask your  Distributor or
write for catalogs.

EIS AUTOMOTIVE CORP., Middletown, Conn.



**Speed Truck
Tire Changes**
WITH **JOB-DESIGNED
KEN-TOOLS**
EASIER...QUICKER

Quality tools for trucks, buses, farm tractors, and aircraft. Hand forged from chrome nickel alloy steel. Tougher, last much longer!

T-19 24" Truck and Bus Straight Spoon

T-20 24" Truck and Bus Curved Spoon

T-29 18" Tool for starting first bead down over rim

T-48A 48" Tool for removing and replacing lock rings

**JOB-DESIGNED
KEN-TOOL LOCK RING REMOVERS**
stand up under tremendous leverage

T-23 24" For Firestone RD, R-1 Rims

T-25 New 18" Ring Remover for 5" Firestone Rims

T-22 18" Combination Lock Ring Tool

T-27 18" Ring Tool for R-1 Rims

SEE YOUR JOBBER on the complete line of Job-Designed Ken-Tools. Forged by the largest exclusive manufacturer of top-quality Tire-changing Tools and Equipment. **THE KEN-TOOL MFG. CO., AKRON 5, OHIO.**

**JOB-DESIGNED
KEN-TOOLS**
TIRE CHANGING
TOOLS KNOWN, USED
AROUND THE WORLD

Circle 372 on Inquiry Card, facing 3rd Cover

Classified Advertisement

SALES CAREER: Nation-wide automotive parts mfg.-distributor offers depression-proof sales opportunity. Protected territories with established accounts now available. Average earnings \$8,000 to \$10,000 per year. Great opportunities for advancement to executive positions. Write today giving background & sales experience. Box 8, MOTOR AGE, 5601 Chestnut St., Philadelphia 39, Pa.

GRIND FASTER... LONGER!

**PERMATEX
VALVE GRINDING
COMPOUNDS**

...MADE FOR THE PROFESSIONAL!

Water or grease mixed, for hardened steel valves and seats, cast blocks... hand or machine grinding. Won't form rings on valves or seats. Easily removed when job is finished.

SEE MORE PERMATEX
PRODUCTS FEATURED ON PAGE THREE



New Products

Continued from page 80

in changing filters by quickly breaking the seal and enabling the mechanic to spin off the used filter with ease.

For more information, refer to New Product Information Post Card that faces inside back cover.

Anti-Freeze

Continued from page 23

ufacturers of nationally advertised products.

This program will help you win back more anti-freeze business, because you can compete for the price conscious, cash-and-carry buyer. You can charge for installing the anti-freeze, a profit you justly deserve. Fair Trade laws hold that the price of a man's labor cannot be fair traded. And, increase your service business in preparing the cooling system for winter weather.

The new anti-freeze program is the result of studying marketing conditions and trends for several years. It has been discussed with many industry leaders including heads of dealer associations. All agreed that some sound business steps must be taken to forestall the loss of further anti-freeze business by servicing dealers.

Under the new price program, dealers will have a mark-up that

is in line with those accepted by the type of over-the-counter outlet with which he has to compete. For car owners who customarily depend on dealers for installation, the dealer can add an installation charge for his labor and services. In this way, dealers can make as much or more than in the past.

Many dealers charge customers for installing carry-in anti-freeze. Most dealers do not make an extra charge for anti-freeze bought from them. To help in establishing a service charge, consumer advertising will tell car owners of the advantages of having an expert install their anti-freeze. It will explain that car owners should expect to pay a reasonable service charge in return for the dealer's time, labor and know-how.

A man asked a sword swallower to demonstrate his art whereupon the artist swallowed some pins and needles.

"But they aren't swords," the man exclaimed.

"I know," was the reply. "But I'm on a diet."

Evaporator

Continued from page 96

tween the inlet and the outlet.

The inlet and outlet pressures are exactly controlled to maintain the boiling point of the refrigerant in the evaporator. The control of this boiling and pressure point is such that the temperature is held at the evaporator very close to the dew point of moisture in the air (or very near the freezing point of water).

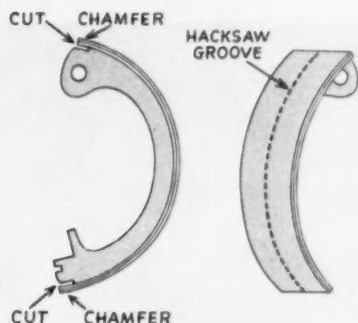
The refrigerant used is a colorless, tasteless, odorless and non-toxic gas. The gas is compressed into a liquid at high pressure. Should the liquid be removed from the container at atmospheric pressure it would immediately begin to boil away. Its boiling point is extremely low. Sea level it will boil at -21.7°F .

(Continued on page 108)

Shop Kinks Continued from page 54

Eliminating Chrysler Brake Squeak

When experiencing a brake squeak on center plane equipped brakes on Chrysler products, proceed as follows: Hacksaw

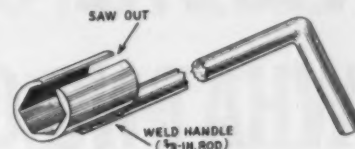


slot between shoe and web about $\frac{3}{4}$ inches on each end. Grind toe and heel back about $\frac{3}{4}$ inches and hacksaw a groove (single blade) in center of lining the whole length. *John T. Kolinda,*

shop foreman, Brauser Motors, Inc., 19 Pelletreau Street, Southampton, N.Y.

Making a Wrench Made From Broken Sockets

Don't throw away those broken sockets. They will make a handy tool for removing throttle and choke control cables



socket and weld on a handle and you will have a crow foot wrench. *Leonard O. Garvin, 2313 East 9th Street, Vancouver, Washington.*

If you have an original idea for a special tool, a short cut on any job or any trick of value to others, write it down and if necessary make a rough sketch. Just make it clear. Send it to Motor Age. If your Kink is used it may bring you \$7.50 or \$25. All entries become the property of the Chilton Company. Because of the quantity of entries sent in, none can be returned.

Check This List!

How long does it take you to find these engine faults?

Fault Description	Old Way	EngineScope Takes
Distributor Cam Lobe Accuracy	30 min.	3 min.
Distributor Breaker Point Condition	30 min.	3 min.
Distributor Cam Angle & Variation	30 min.	3 min.
Distributor Cap & Rotor Condition	10 min.	3 min.
Ignition Coil & Condenser Condition	15 min.	3 min.
Sparkplug & Ignition Wire Condition	10 min.	3 min.
Carburetor Unbalance (8 cylinders)	10 min.	3 min.

This is only a partial list. Many mechanical jobs are shortened too. Write for details and/or a free demonstration.



*Trade Mark

DU MONT[®] EngineScope^{*}

Automotive Equipment Division
ALLEN B. DU MONT LABORATORIES
750 Bloomfield Ave., Clifton, N. J.

Circle 373 on Inquiry Card, facing 3rd Cover

I'M TIRED OF BEING *SOAKED!

*WITH BIG
JACK REPAIR
BILLS



Aren't you, too?

It's easy to
Repair-it-yourself
with a Jack-Pack Kit.
Prices start at about \$2.50

Order from your jobber



or write for FREE FOLDER "Facts on Jacks"
JACK-PACK MFG. CO., 2115 N. Marina Ave., Los Angeles 32, Calif.

VISUAL PROOF! ALL-5

WHAT NO OTHER MULTI-PURPOSE



Packed in exclusive plastic tube with compact counter display in each case of 12.



Most efficient product for cooling systems since cars were invented! Works with any anti-freeze, contains no soluble oil, is always ready to use. Seals leaks, prevents rust, seals cracked blocks, stops seepage, lubricates water pumps. Another advantage is that the alkaline reserve in All-5 prevents the acidity that causes corrosion.

Sealing efficiency of best competitive product is compared with that of All-5. Competitive product is in standard 1-qt. metal can, which has been pierced with five .041 in. holes in bottom. Can is subjected to approximately 3-4 lb. of internal pressure. Fluid spurting from holes in bottom indicates partial sealing failure. Sealing is accomplished by particles of cellulose in All-5.

**VALUABLE
PREMIUMS
WITH
WHIZ FALL DEALS!**

Get valuable FREE premiums with your purchases of Whiz chemicals on either of two new Fall Deals. Act now—call your Whiz distributor for full details. This offer is for a limited time only.



New-model Ronson C.F.L. Electric Shaver for men—or the famous Lady Ronson

McGregor Scarlet Hunting Shirt



DOES FOR COOLING SYSTEMS RADIATOR PRODUCT CAN DO!



Most competitive products use cellulose in one particle size—ineffective except on holes of nearly comparable size. All-5 has particles in three different sizes, ranging from a few thousandths of an inch diameter to maximum size possible without impairing radiator circulation. Above, All-5 in solution is under 15 lb. pressure. Holes are still securely sealed.

Can with All-5 is now at nearly 30 lb. pressure, more than that found in even the newest cars with high-pressure cooling systems. Holes in bottom of can are still securely sealed. Fluid is spurting out where pressure has opened seams of can. To withstand the high operating temperatures inside the engine, asbestos fibers are included in All-5 to seal tiny block cracks.

CASH IN ON THESE OTHER WHIZ COOLING SYSTEM SPECIALTIES, TOO—

Instant Sealer—Stops gasket seepage, radiator leaks, withstands pressures 300-500% above normal. Contains rust inhibitor, mixes with any anti-freeze.

Kleen-Flush—New ingredient, Oxadet, dissolves rust, scale, grease, other deposits rapidly, renews cooling system efficiency. No reverse flushing needed.

Rustop—Prevents cooling system rust and corrosion, lubricates sealed water pumps. Clears rusty water. Always use after flushing. Mixes with all anti-freezes.

Metal-Seal—Heavy duty block and radiator sealer does not char or rot out. Seals aluminum, cast iron, steel. Will not clog cooling system.

Klear-Flo—Fast alkaline cooling system cleaner—economical, easy-to-use liquid. Removes loose rust, scale, sludge, dissolves grease. No neutralizer needed.

Quik-Seal—Powder swiftly forms leakproof seal in radiators, water jackets, hose connections. Harmless to aluminum heads, rubber hose. Packed in self-merchandise.

For more information on any Whiz products, contact your Whiz distributor—or write to



AUTOMOTIVE CHEMICALS

Quality products since 1888

R. M. HOLLINGSHEAD CORPORATION • CAMDEN, NEW JERSEY

Sunnyvale, Calif.

Toronto, Canada

Evaporator Continued from page 104

Only by containing liquid in a metal flask under pressure can it be transported or handled in any way.

The temperature at which substances will boil or condense is affected by pressure. If the pressure is increased, the liquid will not boil until a higher temperature is reached.

It is vital that the evaporator fins be examined and cleaned with low pressure air seasonally. A close examination of the cooling surface fins will disclose the presence of pollen as a colored dust at the lower end of the evaporator. Sometimes the manufacturer will make arrangements to drain off this condensate and

with it the pollen.

Other designs do not provide for drainage.

During the height of the ragweed pollen season, many of our national newspapers, in sections of the country affected, publish daily pollen count information. These data are measured and recorded as grains of pollen per square centimeter of measuring slide surface exposed to the ambient air.

To evaluate the worth of an automotive air conditioning system to remove airborne pollen, two test programs were held. Purpose: to measure effective pollen removal; (1) on the road under actual driving conditions, and (2) in the wind tunnel under closely controlled temperature and humidity conditions.

Both air conditioned and non-air conditioned cars were tested during August of 1958, the highest pollen count month of the year in Western New York. Tunnel tests were conducted in February of 1959 to compare with the previous road tests.

Tunnel tests confirmed the road test results and definitely established the evaporator condensate as the pollen remover.

The efficiency of the wet evaporator to remove pollen, based on recent tests conducted by the Harrison Radiator Div. of GM indicates that as much as 98 per cent of all pollen may be removed.

CASH IN ON THE BIGGEST WATER PUMP SEASON IN HISTORY!

McQUAY-NORRIS

WATER PUMPS

All-New,
Quality-
Tested



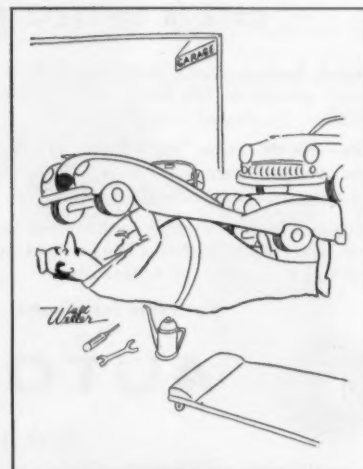
Yes, 1959 promises to be the biggest and most profitable water pump season in America's motoring history. Hurry and get in on this booming business!

NEW ASSEMBLY METHODS MAKE McQUAY-NORRIS WATER PUMPS BETTER THAN EVER!

We have developed and are using new automatic assembly machines to position and align the insides of water pumps. Automatic "stops" assure utmost precision in water pump assembly . . . make sure that bearings and impellers are positioned precisely . . . guarantee that seals and springs are compressed to just the right amount of loading. You can be sure that McQuay-Norris water pumps are quiet and leakproof, and will live to a ripe old age.

Don't fail to see your McQuay-Norris wholesaler for full details of the most attractive water pump bonus plan ever offered!

McQUAY-NORRIS MANUFACTURING CO., ST. LOUIS, MISSOURI





STOP-POWER IN A NUTSHELL



The safest, surest stops in the world today are the result of good compounding with CARDOLITE® Brand CNSL* Friction Components—products made from cashew nut shell liquid. Virtually all new cars boast dependable brake linings formulated with these binders and/or friction fortifiers. And now, this same quality is available in replacement linings.

Now stops are uniform and sure—no matter the weather—no matter the temperature build-up due to speed. There are no more shock-stops from wet linings. What's more—brake lining surfaces formulated with CARDOLITE Friction Components are constantly reactivated, ready for use.

No other brake linings offer such perfect balance of performance, wear and safety. And at little or no increase in cost. So whatever your source, be sure the brake linings you offer incorporate CARDOLITE CNSL Friction Components. Insist on these best-possible binders and friction modifiers.

Research is underway at 3M . . . aimed at higher temperature CARDOLITE Binding Resins for heavy duty applications in transmission clutch facings, truck and train blocks. The wide range of resins and particles will probably permit tailor-made answers to specifications. For further information, see your distributor or write: 3M Chemical Division, Dept. KAU-89, St. Paul 6, Minnesota.

*Cashew Nut Shell Liquid

CARDOLITE is a reg. T.M. of 3M Co.

MINNESOTA MINING AND MANUFACTURING COMPANY

. . . WHERE RESEARCH IS THE KEY TO TOMORROW

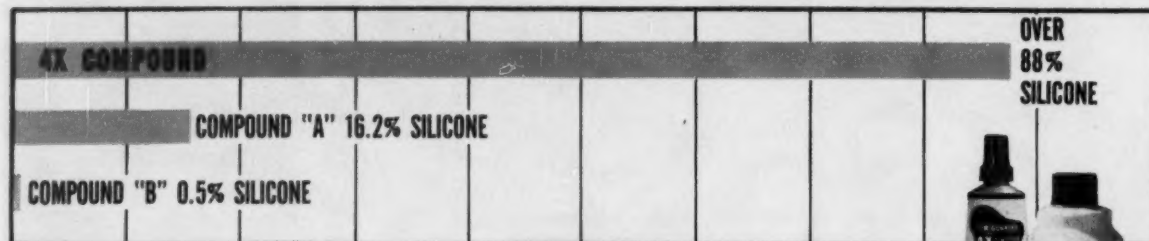


USE **4X**, THE ALL-SILICONE RUBBER LUBRICANT . . . TO GIVE YOUR CUSTOMERS THE SERVICE THEY EXPECT

- ★ Stops squeaks and sticking of weather-stripping, prolongs life of rubber parts.
- ★ Lubricates radio antennae, improves reception; ideal lubricant for window channels.
- ★ Keeps battery terminals clean, minimizes corrosion build-up, prevents electrical losses.
- ★ Protects ignition systems, keeps moisture out, preserves wiring.

LABORATORY TESTS PROVE:

Dow Corning 4X Compound contains 5 times more silicones . . . lubricates 10 times longer!



Dow Corning
CORPORATION
MIDLAND, MICHIGAN

Order 4X Compound or Spray from your jobber today. Write for new brochure containing straight facts about "silicone" lubricants . . . address dept. 1520



Now find cracks, leaks
defects—quickly, easily

ZYGLO®

BLACK LIGHT Portable Inspection Kit

EASY TO USE

- in the shop
- in the field

FOOLPROOF
FLUORESCENT
PENETRANT
INSPECTION

FIRE SAFE
New, improved
high flash-point
materials. Pack-
ed in push-but-
ton spray cans.



Genuine
ZYGLO KIT
complete with
100 W. BLACK LIGHT
\$125.00 F.O.B.
CHICAGO

IDEAL FOR

- Finding oil leaks
- Checking transmissions and differentials
- Inspecting blocks, valves, pistons

Order Today! Attach Coupon to Letterhead or P.O.

MAGNAFLUX CORPORATION

7348 West Ainslie Avenue, Chicago 31, Illinois

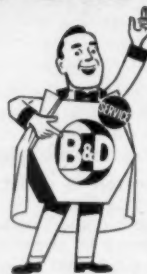
Please send _____ ZYGLO Kit(s) @ \$125.00 each.

☐ Check enclosed, amount \$ _____ ☐ Send on our P.O. number _____

☐ Send only free illustrated bulletin now—includes low prices of ZYGLO replacement materials: pressure cans and bulk.



REPAIR FOR YOUR B&D TOOLS



For genuine Black & Decker repairs check Yellow Pages under "Tools-Electric" for address of nearby Black & Decker

FACTORY SERVICE BRANCH

Free tool inspection when requested • Genuine B&D parts used • Factory-trained technicians handle all work • Standard B&D Guarantee at completion of recommended repairs • Fast service at reasonable cost.

Or write for address of nearest of 48 branches to:
THE BLACK & DECKER MFG. CO., Dept. 55508, Towson 4, Md.



Black & Decker®

QUALITY ELECTRIC TOOLS

Circle 374 on Inquiry Card, facing 3rd Cover





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THE LAST

LAFF



Police captain: So you let him escape, huh? Didn't you obey my orders to guard all exits?

Rookie cop: Yes sir, we guarded every exit. He must have slipped through one of the entrances.



An author found the "e" missing from his new typewriter and wrote the following letter to the company:

Gxtalxmzn:
I havx just rxcxivxd my nxw typx-writxr by railway xprss, and I am forcxd to advix you that onx of thx most important lxttxs of thx alphabxt is missing. Thx lxttx I rxtxr to is thx lxttxr "x" and by that I mxan thx fifth lxttxr in thx alphabxt. It is hard for mx to xx-plain this on this machinx but I am surx you must undxrstand. Plxasx givx this your prompt attxnion as I dpxnd on thx typxwritxr for my livxlhood.

A henpecked weatherman was describing his wife to an old friend:
"Hazel speaks 150 words a minute," he said, "with gusts up to 180."

A man walked into a barbershop and asked for a shave. The barber's new assistant, still in his teens, pulled at his boss' sleeve and whispered:

"May I try shaving him? It will be good practice for me."

"All right, go ahead," the barber said. "But be careful. Don't cut yourself."

The sweetest six phrases in the American language: I love you; Dinner is served; All is forgiven; Sleep until noon; Keep the change; and Here's that five.

Once upon a time there was a sheep raiser in Texas who lived next to a busy highway. One day his wife became dissatisfied with the color of the living room drapes and ordered him to dye them blue. He prepared a tub of blue dye in the back yard but along came a lamb and fell in. The man picked out the animal and chased him away.

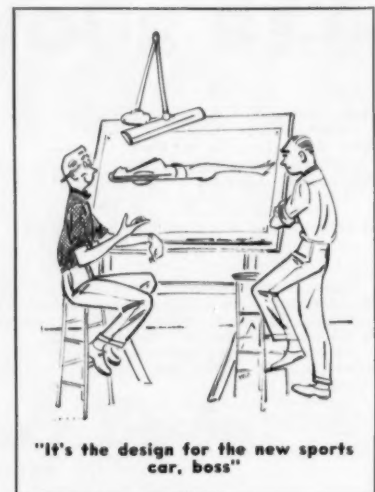
The next day a motorist stopped by and asked whether he could buy the beautiful blue lamb. The Texan got a high price for the lamb and an idea. He dyed lambs various colors and made more money than he ever did in his life.

The truth of the matter is that business is so good that he is the biggest lamb dyer in the state of Texas.



There once was a fellow named Jack Who was cleaning his slacks in his shack.

He used gasoline
That's the last that was seen
Of Jack, his slacks or his shack.



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EACH month Motor Age's New Products Show Window describes dozens of fast-moving items and money and time saving equipment from the country's leading manufacturers of dependable automotive products.

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New Literature

LT 1 Alignment Catalog

Bear Mfg. Co.: A new catalog listing 11 new wheel alignment and balancing services has just been published. The 20-page catalog describes and illustrates the new Bear equipment. The catalog shows wheel aliners and gauges, wheel balancers, body and frame straighteners, headlight and brake testers, wheel and hub presses, tire truers, wheel balance weights and other wheel alignment tools and accessories.

LT 2 Brake Service Guide

World Bestos: A Master Brake Service Guide has been announced. It's illustrated, step-by-step instructions for adjusting and relining twenty types of hydraulic wheel brakes. Serv-

(Continued on page 114)

(Postcard valid for 90 days only)

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P.O. Box 102, Village Station, N. Y. 14, N. Y.

Please send me further information on the New Products, the code numbers of which I have circled below. (Be sure to circle the code number.)

LT1	LT2	LT3	LT4	LT5	LT6	LT7	LT8	LT9
310	311	312	313	314	315	316	317	318
319	320	321	322	323	324	325	326	327
328	329	330	331	332	333	334	335	336
337	338	339	340	341	342	343	344	345
346	347	348	349	350	351	352	353	354
355	356	357	358	359	360	361	362	363
364	365	366	367	368	369	370	371	372
373	374	375	376	377	378	379	380	381
382	383	384	385	386	387	388	389	390
391	392	393	394	395	396	397	398	399

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 Your Company..... Your title.....
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 Service Station..... Specialty Shop.....
 Address..... (street & no.) (city) (zone) (state)

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337	338	339	340	341	342	343	344	345
346	347	348	349	350	351	352	353	354
355	356	357	358	359	360	361	362	363
364	365	366	367	368	369	370	371	372
373	374	375	376	377	378	379	380	381
382	383	384	385	386	387	388	389	390
391	392	393	394	395	396	397	398	399

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 Service Station..... Specialty Shop.....
 Address..... (street & no.) (city) (zone) (state)

New Literature

Continued from page 113

ice procedures, based on manufacturers' shop manuals, contain the latest information available. Useful features include the Hydraulic Brake Finder which identifies wheel brakes on automobiles, trucks and buses back to 1936; three pages of trouble-shooting pointers and a brake inspection check list. The Guide contains a wide range of general service information. Instructions for adjusting six types of drive shaft brakes are included.

LT 3 Lube Equipment Bulletin

Lincoln Engineering Company: A new bulletin on company's small lubricant application equipment and accessories with self-merchandising display material has been published. It illustrates how such equipment and accessories as lube guns, extensions, hoses, couplers and nipples are packaged or mounted for self-service display. Prominently featured is the new portable display cabinet, with pegboard sides for display mounting of equipment and accessories, and storage space for replacements and supplementary items.

LT 4 Welding Equipment

Marquette Mfg. Co., Inc.: A new 32-page catalog on oxyacetylene welding equipment and supplies is announced. The publication is illustrated and includes product design and performance information on company's line of automotive and industrial welding and cutting torches. Gas pressure regulators, hose connections, low temperature cutting equipment, goggles, gas welding rods, face shields and cylinder trucks are also covered in this booklet.

LT 5 Brake Service Booklet

Ammco Tools, Inc.: A new, free booklet that tells how to spot and sell a brake service prospect is available. The illustrated booklet, "How To Earn Big Profits In Brake Service," explains the tremendous brake service potential. It tells how each shop can realize bigger profits in Brake Service. A helpful check list of brake service equipment and accessories needed to get into the brake service business is given.

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